THE

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DEVOTED TO

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ROTATION IN CROPPING.

The importance of a judicious rotation of crops has been a popular theme with some agricultural writers for a period of nearly one hundred years. The first mention we have of rotation in cropping in an English Treatise, is by Dickson, in his work on "Agriculture," published in Edinburgh, in 1777.

We well remember when the system of culture and cropping, which preceded a rotation in cropping, known as the *naked fallow* system, was in common use in Eastern New York and in New England. The naked fallow had its advantages and its greater disadvantages. The practice was to give the soil rest, by laying it by without setting it in grass, and allowing it to produce what it would spontaneously—it was grazed closely, hence the advantage that might have been derived from shade was lost, and that loss was serious. If the land had been set to grass, and it had been but slightly pastured, the restoration of fertility would have been marked and rapid; but simply discontinuing culture and cropping, without setting to grass, and growing it closely at all times, except when clothed with that great restorer of land, snow, the extent of resuscitation was very limited, so little, in fact, that the repeated tillage in preparing for a crop, when the land was again broken up and fallowed, and the production of a single crop would often exhaust all the fertility acquired by rest.

Each repetition of the system, resulted generally in the still further exhaustion of fertility.

Whilst we claim a great advantage in thorough tillage, and in a perfect comminution of the soil to prepare it for production, we, at the same time, claim that the effect of the course pursued in the culture, as practiced generally in naked fallowing, was calculated to dissipate fertility nearly, or quite to the extent that the crop produced exhausted it.

In order to clearly explain how such dissipation or waste of fertility, was a consequence of the culture practiced, a description of it in detail must be necessary.

Usually, immediately after the corn planting, and before the farm teams were turned to pasture, the fallow was broken up.

The plows then used were vastly inferior to those of this day, and several weeks having elapsed since the frost had left the soil, ere the plowing was commenced, the soil would usually become hard, and, as a consequence, the tillage was shallow and very imperfect, besides, deep tillage had, at that day, few advocates. In ordinary seasons, the soil thus tilled would, in a few weeks, grow more or less weeds; these were disturbed and many of them destroyed by repeated harrowings, thus keeping the land nude, and the shallow stratum tilled, was rendered so open and friable that heavy rainfall, unable to penetrate the soil only to depth of the shallow surface tillage, must flow off on the surface, often severely washing the land, and leaching out, to a great degree, the soluble fertility, and thus, as we have said, removing and dissipating fertility more rapidly than the crop would exhaust it.

Before dismissing this branch of the subject, we will repeat what we have often stated to our farmers, that land, especially that having a rolling and rather steep topography, may be exhausted by repeated tillage and nakedness, more in a single season, than the usual tillage and cropping would exhaust in three years.

This is no untried theory, for such were the developments of carefully conducted experiments, at the Mt. Airy Agricultural Institute, where we spent years in experimental farming.

RANDOM ROTATION.

The early examples of rotation in cropping, prior to the aid and direction imparted by analytical chemistry, were simply a change of crop, or avoiding the planting of the same kind of crop in immediate succession. This was well as far as it went; but science has shed her potent and reliable light on the whole subject, and so clearly and brilliantly illuminated the way of the intelligent hus-

bandman, that he knows that certain causes should produce certain and reliable results.

Among other things in science that seems to the plodder almost miraculous, it has taught us that rotation, which we have been taught to look upon as one of the first and most important principles of high farming, may be dispensed with entirely, and we may consult our convenience, the adaptability of our soil, and our necessities, or markets, and continue to grow the same crop on the same land successfully and as long as we desire, and without diminishing the fertility of the soil, and with a gradual increase of crop.

P. T. Quinn, Esq., stated in an address, delivered in 1874, before the New York State Agricultural Society, that he had visited Prof. John Bennett Lawes, of Rothamstead, Hertfordshire, England, where he examined the field of experiment of Prof. Lawes, on which he had been operating since 1843. The land taken for experiment was reduced in fertility. The most important crops of the British rotation were selected with which to experiment; viz: wheat and turnips.

These were grown for twenty consecutive years on the same land, some without any manure, others with a variety. Wheat grown without manure, with good tillage, averaged, for twenty years, fourteen and a half bushels per acre.

An application of ten and a half hundred weight of super-phosphate per acre, yielding only seventeen and three quarter bushels per acre, while three and a half hundred weight of super-phosphate per acre, with the addition of two hundred pounds of sulphate of potash, one hundred pounds of sulphate of soda, and one hundred pounds sulphate of magnesia, produced, in the same term of years, at the rate of seventeen bushels per acre.

Another plot, having the same amount of manure applied as the last named, with the addition of two hundred pounds of ammonia salts, the average yield was increased to twenty-six and three eighths bushels per acre. Plot 7, adjoining, with two hundred pounds extra, that is, four hundred pounds of ammonia salts, with the mineral manures named, the average product was thirty-five and a quarter bushels per acre.

The largest crop of wheat produced in the twenty years, with the same number of pounds of potash, soda, magnesia and super-phosphate of lime, with six hundred pounds of ammonia salts, was at the rate of thirty-eight and a quarter bushels of wheat per acre, which was about three bushels in excess of the yield of a plot manured with fourteen tons of barnyard manure per acre.

Prof. Lawes' experiments with wheat demonstrate the fact, that, no matter how liberally a soil may be manured with mineral food of plants, unless the nitrogen is added, in some form, the yield is diminished, and with a sufficient quantity of nitrogen applied, the crop immediately responds with increase. He found where a liberal application of nitrogenized manures were applied, and the crop produced, and the soil was analyzed, there was a great waste. The drainage water of the land was then analyzed and found to contain nitric acid. This teaches us that it is bad economy to apply ammoniacal fertilizers greatly in excess of the wants of the incumbent crop. Another result attained in these protracted experiments, was that no additional production of straw or grain could be effected by applying more than a certain amount of common salt, potash, soda or magnesia, that is, on wheat or turnips. He found, however, that these substances, especially the potash, in greater quantities on *leguminous* crops, produced very beneficial effects, while ammoniacal salts on this class of plants, was not useful, but, in some instances, was injurious.

He attempted to grow red clover on the same land, year after year, but no matter how he treated the soil, he failed. Prof. Lawes arrived at results in his protracted and careful experiments that may be summoned up as follows: 1st. On land without manure, the yield of turnips falls off in a few years to nothing. 2nd. Of the mineral manures used, the super-phosphate of lime gave the best results; and, thirdly: The largest crops were raised where there were, with the mineral manures, a liberal amount of nitrogenous matter, added in some form or another.

It is to be regretted that Mr. Quinn had not obtained and reported more definitely as to the cost of the substances applied in the experimental cropping, and the net profit resulting.

That is what we want in all experimental farming.

May we not hope to see Experimental Stations established in this country, at an early day, that will give the practical farmer the information he so much needs.

CUT WORM AMONG THE TOBACCO.—A York, Pa., paper says:—Tobacco growers are troubled very much this year by the cut worm. One man in Lancaster county put out 2,700 plants, and in twenty-four hours all but three were destroyed. A ring of wheat bran placed around each plant will protect it from the worm. The bran being sweet, the worm will eat it in preference to the tobacco. After eating, the worm becomes sick, and many of them die, while the others can be easily killed.

Agricultural Calendar.

FARM WORK FOR AUGUST.

This month seems to form a pause between the busy time of planting and working the growing crops, and the gathering in of them in autumn, and the sowing of grass seeds and winter grains. But there is enough to be done to occupy every farmer's time. It is peculiarly fitted for draining, destroying sassafras, briars, weeds and such grasses as are pests, and collecting wood's earth, muck, marl, ditch banks, vegetable fibre, and composting these materials with ashes, plaster and the coarse barn yard or stable manure. If white-washing has been neglected, now is a good time to do it, and wood for winter can be cut and piled up to dry for winter.

CORN.

The late planted corn must be often cultivated until it is at least breast high.

RYE.

Sow rye among the corn at its last cultivation, or as soon as the early corn has begun to harden its grain. Clover may be sown at the same time and cultivated in with the rye. The rye crop is valuable when sown early and on good land. Land which has much silica, potash and sulphuric acid, and is a light soil, is best for this crop.

THRASHING GRAIN.

Get out your wheat at the earliest moment to take advantage of the markets. Let your granaries be thoroughly cleaned, whitewashed and fumigated with tar or sulphur to get rid of the weevil and other insects before you put your wheat away. Try and render the granaries rat and mouse and rogue proof. If you have any extra good wheat save it all for seed, and you will make by it, if you run it through the screen made for the purpose of preparing wheat for seed, getting rid of all impurities and small or cracked grains. Wheat thus cleaned brings double price.

POTATOES.

Keep your potatoes well worked and perfectly clean of grass until they blossom, then give them the final working, leaving a smooth flat hill about the vines. Afterwards, hand-weed if necessary.

WEEDS AND BRIARS.

Mow all weeds and briars, haul them in while green, and put down a heavy layer of weeds, spread a bushel of lime to the load over the weeds and briars, then cover with a foot of earth of any sort, and if from the woods or ditch banks or fence corners, all the better. Continue these layers as high as convenient, say six feet high, six feet wide, and as long as you please. If this pile be near the barn yard all the better, so you can sprinkle it with the liquid manure from the stables or manure heap. Next winter you will have a nice bank of manure to spread or intermix with your stable manure. You may, while fermentation is going on, sow over the rick or pile salt and plaster in considerable quantity at different intervals.

FENCES.

See that the fences are kept secure, especially around the corn field, for at this season, when pastures are thin, stock seem to have a hankering for the tender roasting ears like we do ourselves, and they will trespass if they get a chance.

BUCKWHEAT.

Not too late to sow buckwheat either for grain or to plow under for wheat as a green manuring. If you fallow for wheat, or last working of corn or tobacco, sow buckwheat so as to turn under as a green crop when you sow your wheat; it is good by itself, but if aided with phosphates and bone dust, or only plaster and salt, it is a valuable fertilizer for rye and wheat, and the grasses sown next spring.

TOBACCO.

Endeavor to keep your tobacco free from the worms. This is the time they do most harm; but if you begin in time and destroy the eggs and young worms by hand and with the aid of turkies and ducks, you will subdue them. If, however, they once get headway, you will find it four-fold more difficult.

SETTING MEADOWS.

If you are going to sow timothy and orchard grass, or clover, for a meadow, begin at once and plow deep, harrowing as fast as you plow, so you will have the turf rotted when you cross plow and harrow to receive the seed. The land should be put in prime order and highly fertilized, so that toward the last of the month you may sow the seed, which ought to be brushed in and rolled. Use a plenty of fine ground bone dust or Missouri bone meal. Sow plenty of seed that it may come up very thick.

FALLOWING FOR WHEAT.

Pursue the same course as above suggested for the preparation of ground for grass seeds.

POULTRY HOUSES.

Keep these clean and well littered with straw or leaves. Poultry house manure is equal to guano.

FUMIGATING poultry-houses with sulphur thrown upon glowing coals in an earthen vessel, and keeping the house closed for a few hours, is said to be a perfect remedy for insects of all kinds. The poultry must be removed before the experiment.

GARDEN WORK.

GARDEN WORK FOR AUGUST.

There are but few plants at this season that render the culinary garden at all attractive. The peppers, cauliflowers, egg plants, coss lettuce and tomatoes with cucumbers and nasturtium, if they are all neatly trained on trellises are worthy of observation. But most of the vegetables have been used or in a state approaching "the sear, and yellow leaf," and no longer attractive.

Seeds.—Save the seeds of the best of the various plants grown as they ripen.

Weeds and Grass.—Keep the garden perfectly clear of all grass and weeds.

Strawberry Beds.—Work these, mulch with half rotted stable manure and cut off the runners as fast as they appear, except such as are reserved for planting next month or are for sale this autumn. Encourage the growth of these by an occasional heavy watering with liquid manure, not too strong, or soap suds, and plaster and ashes dusted over them afterwards.

The Dwarf Pears and the Grapes.—Must be kept free from caterpillars and bugs. Thin the fruit where too thick and nip the ends of the branches of both, and of all the dwarf trees, where it is necessary for the health of the vine or the tree, or to preserve a uniformity and evenness of shape, which not only adds to the beauty but to the future usefulness of the plant.

Cabbages.—Keep those already set out, well worked, and set out more early in the month. You cannot have too many cabbage in winter.

Pickling.—Commence pickling. It is not too late to sow gherkin, beans, cucumber, cantaloupe, &c., for late pickles.

Beans and Peas.—It is not too late to sow these for fall use.

Celery.—If you have not done so, plant celery as soon as you can ; shade the plants until well rooted and keep the ground moist by copious watering until a good rain comes. Weak brine poured on the side of the plants, not on them, is a stimulating fertilizer much relished by this superb plant. Liquid stable-manure used in the same way is excellent by way of encouraging the growth of the wholesome, delicious celery. Its medicinal qualities render this very popular vegetable indispensable to good living from October to April.

Onions.—Sow onion seed thick on thin land around a tree or trees, for sets next spring. You can take them up after frost or sprinkle straw over them with a little brush to keep it down, and let them stand out all winter.

Radishes.—Sow radishes at intervals on a rich border; water well every day or so. The Chinese pink or white are the best to sow now. The large turnip white radish and black Spanish are also good for sowing in August.

Farly York or Jersey Wakefield Cabbage.—Sow seed for autumn planting.

Brussel's Sprouts.—Sow seeds of Brussel's sprouts:

The plant grows two or three feet high, and produces from the side of the stock, numerous little sprouts, one or two inches in diameter, resembling cabbages. The leaves look like the savoy, and should be broken down in the fall, to give the little cabbages more room to grow. They are used for fall and winter greens, are quite hardy, and should be treated in all respects like winter cabbages or kale.

Asparagus Beds.—Cut down the asparagus, clear the beds of weeds and grass, fork in rich stable manure, and make the whole surface white with salt. This vegetable is too old and too much liked by everybody, not to have an ample supply during the spring season.

Orchard.—Search your orchard, especially young trees, and where insects of any sort seem to be, dapple with a mop saturated in oil of some sort. Oils are death to vile insects. Then paint the bodies with a mixture of soft soap, salt, sulphur and ashes, reduced by water to the thinness of whitewash. Apply the mixture with a whitewash brush. The proportions of the mixture may be equal parts of soap, salt, ashes and a quarter of a pound of sulphur to a gallon of the mixture after being diluted. It should be, when applied, much thicker than ordinary white-wash, and put on in dry weather.

For the Maryland Farmer.

MARKETING PEARS.

BY D. Z. EVANS, JR.

There are very many reasons why pear culture will not prove so unprofitable as the production of such fruits as peaches, apples and some of the small fruits or berries, and to enumerate the list would consume more space than can be devoted to it just now. Many planters do not cultivate properly or thin out the fruit, while by far the majority of them do not know how to market their fruit so as to command the highest figures and readiest sales; or else are too indolent or careless to pay the attention to it which it should have to make it pay, as it will do under certain favorable and perhaps ordinary circumstances. Much of the fine fruit, such as pears, peaches, &c., finds its way to market in peach crates or half barrels, this fruit being only too often mixed with the poor and unsound specimens, thus making the lot look so badly as to command but an indifferent figure. Let any one at all curious in the matter, examine the markets during the greatest run of the fruit, and he will be surprised at the carelessness manifested. The natural results are, the fruit sells low and commands a slow sale, the commission men generally having to shoulder the blame for this because larger returns were not made. An experienced person can soon tell where the blame should rest; and many reliable, honest commission men are harshly condemned for low and slow sales when they do not deserve it, though I well know, from experience, that there are some black sheep amongst the flock. The first thing in order is to know

WHEN TO PICK

and how to do it. Some varieties of pears should be picked earlier than others, and also marketed earlier on account of the tendency to rot at the core, prominent among which comes Onondaga and a few others. As soon as they will part from the twig without breaking the stem they should be gathered, while with varieties which do not have the tendency to rot at the core, such as Bartlett, Duchesse d'Angoleume and a variety of others, they should not be gathered until they leave the stem very readily.

Pears should not be gathered very early in the morning, at least not until the morning sun has dried the dew from off the leaves and fruit, for, if they are, the excess of moisture is apt to cause quick decomposition as well as delay the ripening when taken to the ripening room. By no means allow a careless or inexperienced person pick or handle the fruit, especially if it be very fine; and, under no circumstances, permit the fruit to be shaken, for bruises hasten decay and lessen the prices correspondingly.

As soon as the fruit has ripened sufficiently and the sun has dried the excess of moisture from off both the fruit and leaves, take a handle basket, such as grape pickers use, and which holds about one-half bushel, and go over the orchard, gathering only those that leave the stem readily, (with some mentioned exceptions), leaving the rest to ripen up, for fruit gathered too early does not ripen up properly, (does not *color* up), but becomes shrivelled and looses much, if not all, of its naturally fine flavor and appearance. The fruit gathered should be put into the basket very carefully, with as little handling as possible, and, as soon as the basket is full, it should be conveyed at once to the fruit room for ripening. Care should be taken not to leave in the sun while picking.

Many of the readers of this may say that we go to so much trouble that it does not pay. Now, right here permit me to say that all this *does pay*, and pays well, too, for it has been our experience that those people whose custom we endeavor to get are always ready and willing to pay well for the finest fruits and also to pay for *style* in packing. We have the name, and not without some justice, of sending as fine, if not the very finest, pears which go into the Philadelphia market. Our pears took the first premium at the Middletown, Delaware Fair last season, and we are thinking of competing for premiums elsewhere against those who have swept all the pear premiums heretofore in other States. We want to show other States that Maryland does and can produce fine fruits, and is capable of producing creditable horticultural produce under proper management.

RIPENING

is the next thing in order, and this requires some attention. The room used for this purpose should be dry and cool and kept darkened. The room we use for this purpose is on the second floor, and curtains are put to the windows to exclude as much light as possible. We spread on the floor, before putting down the fruit, some blankets, the ordinary army blanket being an excellent thing; on these we spread our fruit carefully, just close enough to nearly touch each other, and then cover them with other blankets. We never make the pears more than one layer deep. In a couple of days the fruit begins to assume a handsome, golden appearance, nearly in condition to eat, but just in good order to ship. These we sort out from the lot every day or so, continuing to do so until the flooring is all disposed of.

In this thing of ripening, one should consult the kind of trade he expects to supply. If they are sold to shippers, they should be ripened very little, so they will carry without much loss in mashing or decaying, while, on the other hand, if the retail trade gets them at once, they should be left in the ripening room somewhat longer. Keep all the different kinds of fruit separate, both in picking and repening, for nothing injures the sale of fruit so much as mixing. And this proves conclusively that planters should rather plant more of a few varieties of good sorts, so as to have a good marketing when they come into bearing, than a few of many sorts. This is one of the great stumbling blocks of amateurs in pear culture as well as with most other fruits.

PACKING AND SHIPPING

is one of the many items of importance. We use the ordinary 36 quart strawberry chests, and make 4 trays for each chest, with space enough between them and the sides of the chest to use handles which are cut in the sides. These trays each hold nearly a peach basketful of fruit, and, being shallow and wide, they carry the fruit better than deeper packages, where the weight of the fruit often damages the lower layers. We cover each tray with a good quality of white paper, to make the color of the fruit show to a better advantage and to give it a finished appearance. We also write the name of each variety in the trays on a slip of writing paper, and put it in with and on the fruit, so there will be no mistake.

The sorted fruit, that which would not do well to go in the trays, we ship in one-half bushel crates. The first and second sorts we always ship in trays, always marking the quality plainly, so as not to mislead.

We believe in shipping each kind of fruit to one commission man, to prevent our fruit from coming into competition with itself, which would be the result if we one day should ship pears to A and another day send pears to B, for each would work off the fruit. I have been in the commission business myself and know whereof I affirm.

FIELD-PEASE AS A FERTILIZER.—A planter in Montgomery County, Alabama, reports that last year he sowed cow-pease freely between the rows in a field of corn. A drought came on before the pease matured, and so dried the vines that they died. These he covered by turning two furrows between the rows. This spring, cotton planted on that field is far superior to that on other parts of his plantation. From the results, thus far apparent, he judges the pea-vines equal to a coat of guano in fertilizing value.

PLANT FOOD.

To the Editors of the Maryland Farmer:

It is very important to agriculturists that they should bear in mind the constituents of plant food, and that they should see that the soil, which they may have to cultivate, contains the mineral elements of these constituents, in such a form as to be readily taken up, through the roots of the plants. If the soil, in its natural state, has all of these elements in such a condition and sufficient quantities, then the application of artificial fertilizers will be unnecessary, and will produce but little or no beneficial effect. But, if any part of these elements are not to be found in the soil, it will become necessary to supply the deficiency by artificial means.

It is now well known to agricultural analytical chemists that there are but *fifteen* chemical elements, which enter into the composition of vegetable productions, and this fact has been established and confirmed by the joint labors of hundreds of chemists, who have operated analytically and synthetically, in turn; that is, by first separating the vegetable into its different component parts by analysis, and then growing the vegetable by adding all the different mineral elements, in a state of solution, to calcined sand, or distilled water, in such proportions as would produce the perfect plant.

Of the fifteen elements, eleven are mineral and four are organic, the source of the latter being found in air and water; while the source of the former is in the constituents of the crust of the globe itself. Vegetables are, in fact, but the varied combinations of the fifteen elements, as the different words of our language are but the combinations of the different letters of the alphabet, in the varied proportions in which they are arranged.

The perfect plant may be compared with the good pudding, whose constituents are well known to the good housewife, and the soil, to the pantry. Now, the good housekeeper has no need of sending to the store for all the ingredients on the recipe of the pudding, if she has a well supplied pantry, but sends for those only of which the pantry is deficient. But still she must have them *all* to make the pudding good. And so must the farmer have all the elements of the plant to make his crop good. His soil is the pantry and the crop is the pudding. Let him find out then what is *in the pantry*, in sufficient quantities, and then he will know what to buy to supply its deficiencies, and can make good crops without buying all the ingredients of plant food. Yours,

A. HERBERT.

Chestertown, Md., June 22, 1875.

HEDGES.

Until within the last few years, we have been a zealous advocate of live fences, and have given the osage orange the preference over all other plants that we have tested, for its congenial latitude, but sundry efforts to grow it north of Philadelphia were attended with loss to that degree, from the effects of frost, that we decided that the latitude of the Quaker City was as far north as it was profitable to attempt to grow it.

Whilst we were conducting our Agricultural School and Experimental Farm, at Mount Airy, near Philadelphia, in 1852, we had the care of miles of osage orange hedge, for five years, and we tried a variety of experiments with planting, trimming, etc.

By reference to our old diary of the above date, we found that a hedge, twelve years old, forming an effectual fence, so extended its roots on either side, that it perceptibly affected the crops to the distance of thirty to forty feet, and ruined many crops to the distance of twelve to twenty feet.

It is important to state, in this connection, that the soil was in a very light, micaceous state, and the fertile soil was not more than seven to eight inches in depth.

The hedge plants rooted mainly in the fertile, surface soil, and maintained the ascendency over the crops in the soil, greatly to their injury. By observing the effect of the hedge on the adjacent crops, in fertile, moist, interval land, we discovered that the effect of the hedge on the crops was very slight.

We found the expense of hand trimming the hedges, two or three times annually, was heavy, and also found great difficulty, until we finally hit upon a very successful expedient to repair breaches in the hedge, occasioned by plants growing feebly, or dying outright. We will describe the plan referred to, in detail, for the benefit of those who may not have hit upon it, or one equally good. We removed the defective plants, root and branch, and also lifted, very carefully, the roots of those standing on either side of the breach, to the length of eight to ten feet on each side of the hedge, and dug up the land on each side these plants, so that the roots could be laid quite closely in the border, and nearly at right angles with the line of hedge. As the roots of these old plants were to be confined to a less area than they were wont, we compensated for the reduction of area by increasing the depth and fertility of the border.

We then thoroughly trenched and fertilized the border to an extra width and depth, where the plants were to be set, to round up the vacancies.

Then, very strong, vigorous plants, of the same age as those in the hedge, were taken up from nursery rows, where those in the hedge were grown, lifting them with extra care, and preserving the roots to the length of ten feet.

These were set in the breaches, and the long roots carefully laid and trained, so that they occupied the entire area allotted them, which was trenched, so as to be wider at points remote to the hedge than it was near it—in other words, the border for the repairing plants, on either side of the line of the hedge, was fan shaped, with each narrow end towards the plant.

Then to secure to these plants the whole border, thus prepared for them, a curb of slates, (such as are used for roofing), were set in the border, between the roots of the new and the old plants—this prevented the former from robbing the latter.

We found that we could in this way, not only make up the breach, but, that after four or five years, that plants thus treated were the most vigorous of any in the hedge.

Small young plants, planted in the attempt to repair a breach in a hedge, are entirely overgrown and starved out by the older and stronger plants on either side. We never succeeded until we hit upon the plan described, which, if faithfully carried out, will never disappoint the hedge repairer. We have often prescribed it, and have yet to hear of a failure, but, like everything else, it should be well done. "What is worth doing, is worth doing well."

In light soil, in which the newly set plants are liable to suffer with drought, it will make success more certain by liberally mulching them.

We long since learned that it is not judicious to fertilize too highly the border in which an orange hedge is to be grown. A degree of fertility, sufficient to grow a full crop of corn or wheat, is all that is required. We cannot recommend live fences as highly as we could prior to acquiring our present experience.

As a boundary fence, or to enclose fruit ground, especially near cities and villages, in favorable latitudes, the maclura, or osage orange, is well adapted, but it should always be remembered, that it has the objections mentioned in the foregoing.

We cannot let this opportunity pass unimproved, to urge upon our readers the importance of their endeavoring to inaugurate in every neighborhood, a system that will at the earliest day practicable, enable them to dispense with fences, except around fruit ground, and what will enclose a few small paddocks near the farm barn. This recommendation is more particularly presented for the consideration of land owners in the older farming dis-

tricts, and where land is high, and soiling animals, or partial soiling, is more profitable than depasturing. It is our purpose to further pursue this subject in the early future, in view of its great importance, on account of the onerousness of the needless fence tax to the farmer.

Randolph's Virginia Ditcher.

This valuable machine is the invention of Ex-Governor Randolph, now United States Senator, Theodore F. Randolph, of Morristown, N. J. The *Scientific American* illustrates and describes it in the number for May the 29th, and speaks in high terms of its efficiency. It further says:—

From reports of practical trials, we learn, the machines cut perfectly smooth ditches, of any depth and of any width desired, the power to work them being increased in a diminished proportion to their larger size and capacity. The usefulness of the machine is not confined to ditching. As an excavator, it shows considerable capacity; the machines of six horse power dig from 250 to 300 lineal feet a minute, ten inches wide, and three or four inches thick. This will be found to be equal to 5,000 lbs. solid earth, and nearly two cubic yards, per minute. As a road maker, for pipe trenches, railway embankments, underground telegraph wires, and the like, it would seem to be of much utility. A machine is now being constructed, we understand, for digging irrigating canals in Texas. The agents suggest that, as a single machine will do the work of many farms, the club system would be the best in purchasing, thus making the cost to each person comparatively small.

In connection with this subject, our cotemporary uses the following sensible remarks about underdraining, a matter too often neglected by our farmers, even the best of them. The *Scientific American* says:

Nor is the capacity to receive Nature's gifts, (air, heat and moisture), which drainage secures, the limit of its advantages. That the richest of natural soils, when undrained, will not compare with much inferior soil when drained, all intelligent persons know; but the utility and the wonderful economy of the drainage system is best illustrated when fertilizers come to be used. The drained land receives and retains, almost without loss, the fructifying qualities of fertilizers; while, from obvious causes, the undrained land receives slowly, wastefully, and always coldly, the expensive helps to its productiveness. The best of fertilizers, used on undrained soil, will yield but a temporary benefit; while much poorer land, drained and fertilized, will be almost inexhaustible.

RED TOP GRASS.

We clip the following practical articles from *The Canada Farmer*, one of our most valuable exchanges:

Red top, when green, is not the equal of blue grass, and, when dry, is not the equal of some sorts of hay. But in either case it is above the average of our wild or cultivated grasses. Unless it grows unusually rank, is injured in curing, or cut when too ripe, it is relished by all kinds of stock, and is eaten very clean. Unless pains are taken in curing and stacking it, there is danger of its becoming musty. On rich lands it may usually be mown twice a season, and the second crop will make excellent food for young cattle. On rich pasture lands it is well to mow it after it goes to seed, as, by so doing, a fine crop of foliage immediately springs up after the scythe.

Red top does best on rather cold, moist soil, and may be grown with the best economy on lands that will not produce good crops of corn, grain and potatoes, in ordinary seasons. An excellent location for this grass is at the foot of hills and banks, from which water oozes a considerable portion of the year, or where water remains late in the spring. Undrained meadows, where timothy and other grasses do not flourish well, will produce good crops of red top. The character of this grass varies much, from the soil and situation where it is produced. On dry, gravelly soils it is short, and has hard, wiry stalks that are little relished by stock, either as grass or hay.

As an example of the endurance and productiveness of this grass, the writer of this has an acre of well sown red top, which has been mown sixteen years, and never received any manure. Last year it produced over two tons of excellent hay, and was afterward, as in previous seasons, pastured in the fall. A small amount of red clover for years has maintained itself in this patch of red top, and has apparently been protected by it, as it has died out in other portions of the same field, where it was sown in timothy and other grasses.

SOWING GRASS SEED.—A correspondent of the *Ohio Farmer* says:—Our experience of twenty-five years may be worth something, and we will give it for the benefit of your thousands of readers. We try to sow on the last snow of winter. Eight quarts of timothy and four quarts of clover will give a good seed. Never failed to have the clover do well but once in twenty-five years. Last year we sowed a little two early, and I lost most of the clover on all but four acres, which we sowed a week later and had a splendid catch. Late years I put in, say two quarts of red top, which will hang on and come in when the other grasses fail. It makes a better sod also.

HARRIS LEWIS says he has cut eight feet of Orchard grass in one season—four mowings.

AGRICULTURAL ADDRESS DELIVERED BEFORE THE KENT COUNTY AGRICULTURAL CLUB.

BY JAS. ALFRED PEARCE, JUNE 15, '75.

Gentlemen of the Kent County Agricultural Club—Ladies and Gentlemen :

When requested to address this association upon the recurrence of your annual festival, I understood that I would not be expected to present an essay upon the subject of agriculture in its general scope or in any of its special developments, but simply to say a few words, such as may appropriately connect these festive exercises with the spirit of your organization, and, in performing this task as best I may, I shall dispense with the customary apologies for want of qualification—a custom, I think, "better honored in the breach than in the observance" —and I shall address myself at once to the subject I propose for your consideration, which is the characteristics and advantages of a farmer's life in this age and community.

Two thousand years ago, the sweet pastoral poet, Virgil, sang :—

"O, fortunatos nimium sua si bona norint
Agricolas,"

which may be roughly rendered in English :—

"Oh too happy farmers if they but knew their own good things."

The translation lacks indeed the poetic beauty of the charming original, but presents the poet's thought with truthful and vivid prominence.

Let us see then what are some of the boasted advantages of a farmer's life, and let me lead your minds, if I may, from the asperities and disappointments incident to every human occupation, to the brighter and happier features of the life which claims you and so many of the human race.

I am not blind to the truth that farmers, like other men, must encounter trouble and oppositions even in the successful prosecution of their business, and I recognize the fact that the farmers of Kent county, in common with their fellows throughout the United States, are to-day bearing heavy burdens, which have not always been their lot ; but it is on that account, none the less true, that you have within your grasp many and valued privileges, some peculiar to the time and place in which you live, and there is no fitter time to recount these privileges than an occasion like the present. It is easy to assemble men together for idle complaint or hopeless redress of their grievances, but not so easy to draw them out for public acknowledgment and thankfulness for even those blessings which they admit, and we cannot, I think, turn the present occasion to a better use than a recognition of "our own good things."

In doing so, I propose first to consider the general advantages and characteristics of a farmer's life in this country, and then those which may be considered, in a measure, peculiar to our own State.

In this favored country almost every cultivator of the soil may, with industry and economy, become a landed proprietor if he desire it, and thus secure for himself the blessing of a permanent home, the domestic and social advantages of which cannot well be estimated.

This home is consecrated to the sacred memories of childhood, and fosters that love of country which in every age and nation has marked the purest and best men, and given birth to some of the noblest acts of humanity. The farmer's home is something more than the bare walls and roof which give shelter and protection to the laborer of city and town, most of which are the property of unknown landlords, who have little interest in either tenant or tenement, beyond the punctual payment of the utmost rent, which can be imposed upon either. Upon such dwellings there is little expenditure of money by the owner, or of care by the occupant, and some of the most cherished attributes of home are strangers to their precincts. But the farmer's home invites the co-operation of every member of the family in adding to its value, its comfort and its beauty, whether it be one of the few remaining ancestral mansions, such as "Hampton," in Baltimore county, or one of the many neat but unpretending cottages, which mark the steady rise of energy and worth in our land. To the first, the wealth of more than a century and the hereditary pride and affection of succeeding generations has assured the preservation and development of its rare and time-honored beauties ; while to the last, (and of these I would more especially speak), the natural love of rural life and the healthy ambition for advancement are daily adding beauties and comforts.

While the head of the family is engaged in the felling of the forest, the tillage of the fields and the harvesting of the crops, the boys can assist in the care of the stock, the driving of the teams, and perform the errands to mill or blacksmith shop, while in the dwelling, the garden and the dairy, the mother and daughter may lend their magic influence to beautify the house and cheer the heart of the father ; while contributing no small share to the revenues of the family by their industry and thrift. It cannot be urged by any Maryland man that the home thus pictured is a fancy sketch. The art of cultivating the ground is not in its infancy—nor do you "force a churlish soil for scanty bread." You do not live in a wilderness waiting to be subdued by man, nor in a climate whose rigors forbid the full fruition of your labors. Your lot has been cast in a quarter of the earth, which the hand of your forefathers has already made to blossom as the rose, and in a climate which ensures a bounteous yield of every article of food necessary for home consumption and of many adapted to the wants of a world wide commerce. True, you must toil and labor before you reap, as who must not, but it is not the slow manual labor of the rude systems of antiquity. Genius is daily imparting an impulse to the hand of labor, reducing the severity of toil, enlarging the field of thought for the cultivator of the soil, and giving leisure for the development of his mental faculties, and the application of scientific research to the productive capacity of the earth. That marvel of sagacity, popularly known as "Old Probabilities," forecasts for you, day by day, with almost unerring skill, the weather you are to expect ; and though the wind still bloweth where it listeth, you may hear the sound thereof, and may tell whence it cometh and whither it goeth, and may largely avert the evils of storms, which, however sudden, are no longer unheralded. Such marvels has science worked in aid of man.

The occupations of the farmer have always favored the study of the great principles and mysteries of nature, and the advance of knowledge, and the mechanical appliances you have called to your aid, give you ample time to repose, for quiet contemplation of all around and introspection of all within. One of the peculiar privileges of the enlightened farmer is the splendid opportunity afforded him of communing with the secrets of the universe, of studying the silent and powerful forces of nature, and of discerning the delicate and beautiful analogies existing between natural and spiritual life, and truths. The man who has committed to the bosom of the earth the material and labor upon the product of which he expects to sustain himself and family, and who has watched with anxious care, winter and summer, seed time and harvest, germ and blossom and autumn grain, will have indelibly graven on his mind and heart the great truth that divine power and wisdom governs the world. Infidelity may lay hold of the thoughtless idler, or skepticism ensnare the mere student of books, but divine truth is clear to every thoughtful student of nature. It is in this sense that we may perceive the true force and proper limitations of the homely adage, "God made the country—man made town." In the one the tendency is to put our trust in our own intellectual powers—in the other to commit our labors to the benificence and unfailing goodness of nature's God.

Another advantage is that the employments of agriculture are most favorable to health and to independence of thought and action. There is no more valuable class of society than country gentlemen of intelligence and character, acquainted with their community and its wants, and upon whom devolve the social and political duties, upon the faithful performance of which so much of the happiness of individuals and of the commonwealth depends. On the farm is reared

"With rigor for his good designed
The favorite man of all mankind,
His form robust and of elastic tone,
Proportioned well, half muscle and half bone,
Supplies with warm activity and force
A mind well lodged, and masculine of course,
Hence liberty, sweet liberty inspires
And keeps alive his fierce but noble fires—
Patient of constitutional control,
He bears it with meek manliness of soul;
But, if authority grow wanton—woe
To him that treads upon his free born toe,
One step beyond the boundary of the laws
Fires him at once in freedom's glorious cause.

The sharp contact and fierce competition of the city too often consumes body and soil, and demands strength of body and strength of mind from those who court its dangers. Hence you will find the ranks of all professions and occupations constantly replenished from the fresh, vigorous and elastic material furnished by the country. There is no more wonderful transformation, than that so often seen, of the uncouth country lad to that of the eloquent preacher, the learned lawyer, the brilliant engineer, the merchant prince, or the sagacious capitalist, and the secret is he brings to his work a sound mind in a sound body.

Another feature of the farmer's life is that he depends less upon the co-operation of others, than any class of men; in other words that he is more independent of the complications of society. He ministers to the prime wants of the world, while his own wants, to which he cannot minister, are comparatively few, and the contingencies upon which the results of his labors depend are fewer than those which attend almost any other vocation. This assertion may seem to the thoughtless and discontented farmer a bold one, yet I believe it is true.

The mechanic must risk his labor and material on the honesty and success of the customers among whom he has distributed the year's work. The tradesman, however careful he may be, must dispose of his stock for which he has paid cash, often on long credit, to the numerous customers of whose character and means he has but a general and imperfect knowledge, and thus hazard not only his profit but his capital. The merchant of the great cities, even when at the flood tide of prosperity, may be caught in a financial panic, with his ample means so extended and scattered in distant regions, that it is worthless to him in the emergency, and before it can be called in he is ruined. The banker who is a millionaire to-day, is a beggar to-morrow—under the adroit manipulation of stocks by his rival—or it may be by his more sagacious or fortunate friend, for among speculators friendship seldom interferes with a neat operation. The farmer, however, is subject to none of these dangers unless he choose to be. In all well regulated communities farmers products are sold by experienced firms at such time as the farmer selects, and for cash down. He has generally ample opportunity to estimate his income fairly before he is compelled to incur undue expenses, and if ordinarily prudent in the management of affairs, he cannot go very far astray; and this is true, in spite of the vicissitudes of climate and weather, the devastation of fire and water, and the ravages of insects, which of late years have been so destructive in portions of our country. The droughts of summer and the moisture of winter sometimes cut short the yield, and fly and worm destroy the hopes of a season; but these calamities are rare, and are by no means wholly beyond the control of skill and judgment. Lands made rich by the intelligent application of domestic manures, and deeply and well cultivated may almost defy the worst wet and drought of our climate, and silent observation, that great source of knowledge and power in every department of study, often enables the farmer unerringly to determine the best time and mode for seeding, cultivating, harvesting or selling his products, and thus to reduce the contingences of misfortune to the minimum. And so I say, that the farmer's results, with an equal share of intelligence and forecast given to them, are as reasonably certain and ample as those of other men.

The farmer may reflect with unmixed satisfaction that his gains, whether large or small, are not only the fruits of his own toil and industry, but that they have not been acquired at the cost of loss or injury to his fellow men. The speculator who, in strict accordance with the technical rules of the exchange, has created an artificial panic in stocks, and has bought at figures which add thousands, perhaps millions to his bank account, may justly feel a pride in the financial shrewdness, which conceived, planned and consummated the operation, but he cannot wholly forget that such gains cannot be secured to him without corresponding ruin to those whose property he has forced upon a panic-stricken market.

[*To be Concluded in our next.*]

AGRICULTURAL EDUCATION.

To the Editors of the Maryland Farmer.

My friend, the author, having shown me two articles in your issues of December, 1873, and of February, 1874, one of them entitled, "An Itinerant Agricultural College," I take this occasion to commend the ideas and plans, therein stated, to the careful consideration of farmers.

My friend's views regard a subject important, as well as beautiful, and involve a principle which may be made very useful to the community at large. The diffusion of scientific and practical knowledge generally, besides enlightening the mind, can be made one of the chief means of ameliorating the condition of the people, for it not only points out and gives facility for constant occupation, but also opens the way for a living and a revenue to all who will use ordinary intelligence and industry.

The idea is certainly a good one, to lead the minds of our farmers and their children to a higher course of *thought* and *action*, than that at present in vogue with them, especially concerning their own pursuits.

As your journal is so closely allied to the interests of those who live on and till the soil, I respectfully ask whether it might not do good to bring these articles again before the public for republication. No doubt many of the several county papers would likewise take hold of the subject with more or less of favor and earnestness. And thus some step might be taken for lecturing and the imparting of useful information, which, in the course of a few years, would prove very beneficial to portions of our State.

A series of lectures on plants, soils, atmospheric influences and changes, on animal and vegetable life, on mechanics, drainage, the proper development of the land and of the resources of the farm, on buildings, laying off and dividing of lands, &c., would prove not only entertaining topics to the people of the country, town and village, but would be highly instructive also to both old and young. These lectures, well and plainly delivered, would enlighten the mind, lead to thought and reflection, and cause an investigation into subjects of the most vital importance to the wealth and prosperity of our State—subjects, too, *so little* thought of, because, no doubt, they are so familiar and near, daily seen, being above, around and under us all.

If we expect the lands of our State to be brought up to the fertility they are susceptible of, and be fully developed, we must mingle science with practice, and have an agricultural community, which, if not highly educated, shall at least be composed of *reading* and *thinking* individuals—men, not narrow-minded and wrapped up in themselves alone, but men who feel an interest in their several communities, who will work for its good, and who will view that as a benefit to themselves which is of advantage to others, and make also that which is beneficial to themselves a blessing to others.

With the mind happily occupied in seeking knowledge, (especially of this kind, which evidences the blessings of the Creator in His grand and glorious, yet simple works, touching the productions of life), with every one engaged in some honest employment, there will be no place for idleness and ignorance, drones will not be tolerated, a religious feeling will prevail, vice will disappear, for it will have no chance to show its hand or head; crimes and other violations of law will diminish, and the progress of our State in general intelligence, wealth, happiness and in moral improvement may be confidently predicted.

It would seem to be the part of wisdom for people *voluntarily to tax themselves* a small amount in a common beneficial project, which is intended to give pleasure, instruction and improvement, and which will indirectly prevent somewhat of crime, suffering and injury, rather than afterwards *to be taxed*, however they may dislike it, for the expenses which have arisen and must be met, because of the very infractions of law and other disasters, which the first mode would, partially at least, have guarded against.

I need merely refer to the effect such a Course of Lectures, as mentioned by my friend, may produce on the young and tender mind, when the several districts become aroused to active thought. How it will aid the school room in starting enquiry there and at home, in creating interest in study, in leading children to think for themselves, and to find out and to recognize that they have a power within them—a truly important step in education—which they can feel and cultivate and improve by exercising their minds.

By listening to these lectures, and hearing them talked of, many a boy may have his course and success in life so shaped as to lead him to become a better farmer, mechanic, physician, lawyer, minister, a more intelligent and useful citizen, a kinder husband and parent, a more truthful, honest and upright man, for the essences of these sciences is truth. And the female portion—the girls too, gaining knowledge, wisdom and religious inspiration from the description and contemplation of nature's operations, will be enabled to exercise, as they grow in age and grace, a more wholesome power, by woman's influence, in the household, in society and in the community, and be the better prepared for the various duties pertaining to their sphere.

The objects of the Agricultural College and the proposed idea of qualified lectures, (how would it do for the State Board of Education to appoint them ?), circulating through the counties to which they may be invited, are well put, and deserve the careful attention of farmers generally. I am inclined to believe, though some might come in at first to hear and tell of something new and strange to them, that after a few lectures, many would no longer be "strangers" to such gatherings, for they would come to be entertained and instructed about the elements and substances and origin of things, about the productions which maintain life, trade and commerce ; they would learn somewhat of the principles underlying and governing a community of interests and those which affect the interests of a community, and they would find such assemblages exerting a great moral power, and giving unity of purpose to social life.

There is great need of our youth learning all they can about those things in which they are to be engaged in life. These lectures will help them to acquire the requisite knowledge, and stimulating the prosecution of similar studies in the schools, we may expect that sound, useful and practical instruction will lead to greater interest in, and a better acquaintance with, the subject and modes of developing the resources of our State. ARATOR.

POTOMAC FRUIT GROWERS.

JULY SESSION—1875.

The Potomac Fruit Growers' Association held its Regular Monthly Meeting on Tuesday, July 6, at Washington, Chalkley Gillingham, President, in the Chair ; J. E. Snodgrass, Secretary.

This session was more largely attended than usual, and the exhibition of fruits greater than hitherto.

John Saul exhibited some rare specimens of the Japanese Golden Lily, (Lilium Auratum), from his conservatory on the 7th Street Road. This gentleman had on the tables samples of the following fruits from his prolific establishment, viz :—Hosensherk and Peach Pears ; Downing's Mulberry ; Victoria, Prince Albert, Red Dutch, La Versailles Currants ; Herstine, Brandywine, Clarke, Philadelphia, Dheering, Turner, Golden Thornless and Doolittle Raspberries, and Houghton, Mountain and other gooseberries. Some of the varieties of these several fruits were rare as well as fine, and samples of the raspberry vines, which accompanied that species of fruit, showed that they were prolific bearers.

D. O. Munson, Falls Church, Va., exhibited samples of raspberries :—The Brandywine, Herstine, Mammouth Cluster, Doolittle, Black Cap, Dawson's Thornless, Kirtland and Amazon—all highly creditable to the grower and this section. Also samples of Carnation and Morello Cherries and the Wild Goose Plum.

President Gillingham placed on the table a number of samples of pears, apples and peaches, to show their favorite progress in development the present season.

H. Snowden, Collingwood, Va., added quite well matured specimens of the Red Astrachan and June Apples, also samples of the Philadelphia Raspberry and Morrello Cherries.

Friend Benj. Hallowell, of Maryland, sent specimens of the "Kentish Common Cherry," and was labelled "common pie cherry," but which all who sampled them voted to be decidedly *un*common in size, perfection of development and flavor. These rare specimens were accompanied by the following letter :

ROCKLAND FARM, Sandy Spring, Md., 6th mo., 25th, 1875.

Dr. Snodgrass, Secretary "Potomac Fruit Growers' Association :"

Dear Friend :—I have a tree of the "Kentish Common Cherry," a basket of the fruit of which I wish to present to the association at its meeting on the 6th of next month, if thou thinkest it will be acceptable. The fruit was brought into this neighborhood by the late philosopher and civil engineer, Isaac Briggs, at his farm, called Sharon, about 1794 to '96. His daughter, Sarah B. Stabler, became the proprictor of Sharon, and in 1849 she grafted a tree for me, (among other friends), on a seedling procured from an old fence row, supposed to be a Blackheart Cherry. I lived in Alexandria at the time, and the tree was not removed to my farm until the 31st of 3d month, (March), 1859, when its body was three inches in diameter, and it was somewhat stunted in transplanting. Its body is now over ten inches in diameter, and it bears delicious fruit, and pretty abundantly. Isaac Briggs grafted those he first introduced on stocks of the Blackheart Cherry, which seem to be native to this district of country, (and I think to Fairfax also), and both trees grew to be large. The one from which my tree was propagated lived to be over 50 years old, and bore many bushels of fruit annually. Now, a graft or bud being only a growth or limb from the tree that appeared to die of old age, its inherent vitality or power to dispose the sap of the stock into which it is inserted, so as to form the fruit of the Kentish Common Cherry, naturally becomes weaker ; and, although my tree is only about 27 years old, it begins to look and behave like an old tree. I have been told that the stones of the Kentish Common, like what I know to be the case with the "Common Pie Cherry," (of which I have several trees growing, raised by myself, now 30 years old), produce seedlings that bear the same kind of fruit. I regard it as the very best and most profitable cherry grown, for family purposes, being, when fully ripe, pleasant to the taste, tender and wholesome for the table, and of first quality for cooking, drying, preserving and pickling ; and the trees bear very abundantly. Now, my object is to have the fruit cultivated more generally, and I wish some members of the association would plant the seed I will send thee, and from seedlings thus produced graft on seedlings of the Common-heart Cherry for standard trees, one of which would be a treasure for a family for fifty years. I would be very glad too, if some one in the association, who knows, would state the best time of year and mode of planting cherries ; whether with the pulp attached, or simply the stone, to obtain seedlings. I was very much interested in the proceedings of the association on the 1st of this month, as published in the *Weekly Star*. I think you are doing a good deal of good by disseminating useful information on practical subjects. The report on "Vinegar in the light of Science" was particularly interesting.

Cherries were further discussed. John Saul asked Major H. C. Williams for information, who replied that, he has long been practically familiar with the habits of the fruit, which was the subject under discussion. When he first attempted to grow cherries at his place at Vienna, Va., he felt discouraged. But of later years he felt differently, the demand for them having increased. He had realized three dollars a bushel this year in the Washington market, although cherries are very abundant, and he encountered a dealer who was prepared to contract for a hundred bushels at that figure. He could distinctly remember when a few buckets of them brought to market, as still, by the colored people, was the height of expectation as to demand here. He mentioned the Napoleon, the Dowton, the Elton, Knight's Early Black and the Florence as among the varieties he had in bearing. Next year he expected to have eighteen or twenty other varieties in bearing.

Mr. Saul said Major Williams had referred to the custom of letting cherry trees grow too high. He thought that error was the chief cause of the non-productiveness and short life of many trees. The stock of the cherry is really not hardy. To protect them against the direct and too powerful rays of the sun, they should be low, and the trees should be encouraged to throw out their branches as near the ground as possible. He was prepared to en-

dorse Major Williams' opinion of Knight's Early Black, but there were two others that came before it. These were the "Early Purple Guyne," and what was known as the "Early White." But the best of all cherries he was acquainted with was the Empress Eugenie, which was, in fact, a variety of the May Duke. This variety had born quite well at the second year in his nursery. He remembered to have gathered a crop of cherries, during the war, on the 18th of May. He commended Coe's transparent as best of all. He had given this as his opinion in the pomological convention at Philadelphia, and Charles Downing had seconded that opinion at that time. As a late cherry he would commend Vale's August Duke—a misnomer in this latitude, however proper further north, seeing that it ripened about the middle of July. It was, like the Empress, particularly well adapted for dwarfing.

Mr. Munsen had sold cherries from the May Duke trees, that furnished the samples on the table, at three dollars per bushel in Washington this year. That variety ripened sooner with him than the Empress. His trees had borne very abundantly.

Treasurer Pierson called attention to the important consideration, as touching the fruit under discussion, that it never failed in the Potomac region.

Secretary Snodgrass said he protested against his stopping there. He had seen as fine cherries on the other side of Blue Ridge as on this side, and in the Shenandoah valley—particularly on the soapstone ridges and other elevated spots.

Col. Hiram Pitts, Uniontown, D. C., knew from experience of the difficulties encountered in growing cherries further north. Judging from what he had seen here, his first impression of the suitableness of the climate had been confirmed fully. The secret, no doubt, lay in the milder and more equitable temperature of this region.

Dr. Howland said he had seen fine cherries on a soil of clayey loam. Col. Daniels had trees, excelled nowhere for bearing qualities, standing in a clayey loam.

Mrs. Nute had observed that at Milwaukie, Wisconsin, along the lake, cherries did poorly, because of the cold lake winds. Further back, in the same State, they did much better. This she said with reference to the question raised by the secretary, as to whether the proximity of the water of Lake Erie was not the cause of cherries doing better at Buffalo than at Detroit, and the circumstance of grapes doing so finely in vineyards surrounded by Lake Erie.

The subject of vinegar was discussed at some length.

Dr. Howard said it was well to add a ferment where it was desirable to hurry the process, and also some oak shavings to give the atmosphere more ready access to the liquid.

Secretary Snodgrass asked whether he meant to say that a ferment was necessary when alcohol was converted into vinegar.

Dr. Howland replied he did not, but that, while nature would do the work unaided, it could be hurried up in that way. That was all he meant to say.

At the mention of the paper of the secretary, Major Williams got full enough of ferment to turn a hundred barrels of molasses and water into vinegar. He threatened to "review that report and make its author and committee feel ridiculous." He denied that there was malic acid in vinegar, but *lactic* acid instead.

Dr. Howland said he should look for lactic acid in sour milk, not in sour cider or vinegar. He endeavored to satisfy Maj. Williams that the report of the scientific committee, of which he, (Dr. H.), was a member, was correct as to the processes by which nature formed vinegar, giving a clear and succinct scientific *resume* of the same.

Secretary Snodgrass quietly said he was not the least alarmed by the dire threat of his friend. The science of the report would take care of itself. Let the threatened review be made by all means. It might aid, but could not destroy, the truth.

With a few remarks by Dr. Gross, confirming what Dr. Howland and Secretary Snodgrass had said on the scientific question involved, the association dropped the subject as too sour for further consumption of time, and at the president's suggestion that they had enough of it.

Several new members were elected, and thanks voted to Charles Downing for interesting books, by him donated to the Society, when the Society adjourned to meet on the 1st Tuesday in August.

RIDGING vs. SURFACE PLANTING.

It is a common practice with all market gardeners to ridge their grounds in raising beets, turnips, carrots, etc. So it was with our ancestors in raising corn. They thought it was necessary to ridge the land but could not tell why, only that they could, by planting across the ridges, get the rows both ways. In after years, "furrowing out" was resorted to as the best way. But some one did not like this way and he invented a "marker" He observed, as many of us have to our loss, that if the season was wet and backward, his corn being below the surface, water-soaked and rotted. So it is with wheat if sowed on uneven ground. That in the hollows and on top of the knolls is inferior to that on even or level ground. Some men, too, in planting their potatoes, plow a deep furrow and drop their potatoes in the bottom of it, saying that it is natural for the tubers to grow up, and if planted on the surface they would all grow out of the ground and be sunburnt; and they will enumerate many reasons why they should plow a ditch in which to plant their potatoes. But the practice of ditching for potatoes or ridging for corn or root crops I do not like. While I believe it all right to plow a furrow in marking for potatoes, I think it best to fill the furrow with the hoe, at the same time mixing in some well rotted stable manure, making the hill rich and mellow. Then drop and cover the seed two or three inches deep, and my word for it if you do not have a good yield the fault will not be in the planting. I have always observed that in our clayey soils of Northern Pennsylvania, if a crop be planted above the surface the hills or ridges dries out, and if planted below the surface the crop is small and decidedly inferior to those planted on the surface.—*Cor. American Farm Journal.*

THE DAIRY.

LONG TABLE TALK ON DAIRY MATTERS.

NO XV.

Wet and Dry Dairy Houses.

Various substitutes have been used for the old fashioned spring house, the objection to which we mentioned in our last. The building of a dairy house is not always a matter of choice; where good cold running water can be obtained, there the house will usually be built, which, with all the difficulties we have enumerated, will answer for the few cows usually kept on the farm, and the very few pounds of butter usually made in the winter season, but which is seriously deficient in the matter of temperature, or rather control of the temperature, in the winter season, for large dairy operations, where butter is the principal product, and this deficiency has led Prof. Wilkinson and others to make the question a subject of scientific investigation, and as the result of Prof. Wilkinson's labors, we have a plan for a cold air dairy, in which the temperature is regulated and controlled by means of subterranean pipes, the whole house well ventilated and arranged, so that the farmer can have two indispensable buildings, ice-house and dairy combined, within a few feet of his kitchen door, without the long and arduous tramp to the foot of the hill for his dairy luxuries. We saw recently, in Howard county, a practical illustration of the Professor's theory, and we give the plan below, after referring to one or two other substitutes for the spring house, frequently met with in our section, and from which our readers can make such a selection as their location may require.

AN ICE HOUSE DAIRY.

First. There is the ice house itself; shelves to slide up and down may be arranged along the sides of the building, and by keeping them above the ice, lowering as the ice melts, a limited quantity of milk and butter may be kept good and firm; but this is only a summer dairy, and at best a poor substitute for where meat and vegetables are kept in the same place, and straw and melting ice are around, there will be great difficulty in keeping the dairy products in the condition in which they look best and may be best preserved.

A PUMP HOUSE DAIRY.

Then we have the pump house. This is a house a few feet from the pump, made of logs, frame, brick or stone, with wooden troughs for the milk vessel; these troughs receive the surplus water from the pump by means of a leader, or water is pumped into them at certain intervals, or what is better, a pipe is sometimes laid from the water chamber of the pump stock to the troughs, and as the water is drawn up or forced up into the stock, a certain portion runs through the pipe into the troughs, and where the pump is used often enough, a fresh supply is kept running in, and the temperature kept low enough: the surplus water may escape from a notch or auger hole made at the top of the trough, where it is desirable to lead off the water; but the attention which this plan requires is a strong objection to it; the breaking down of the pump, absence of the family, or neglect from other sources, would make the standing water in the trough elevate the temperature, and more or less impair both quality and quantity of the product. But this plan is far superior to the ice-house dairy, as we know several in operation which do well; ice may be put into the troughs to still further reduce the temperature and prolong the period for which the pump water may remain in the troughs. If the temperature can be kept at 55° F. in or near the water, it will answer.

A CELLAR DAIRY.

Next, a cool cellar is sometimes made use of in several of the Northern States. This is the only dairy house used in the summer season, and when kept clean and at a proper temperature—never much over 58° F—without danger of spoiling the milk or impairing its excellence by the articles usually stored in cellars. It is a good and convenient place, but requires considerable care to keep it properly, and where a cellar is used, the milk should be set in shallow tin pans not over 4 inches thick, that all the cream may have time to rise before the souring of the milk.

A COLD AIR DAIRY.

We presume most of our readers are familiar with the theory, that by the introduction of cold air into a dairy room, from an ice house, the cool earth or other source, the temperature can be kept in a proper condition for the rising and preservation of the cream, making of butter, and other processes of the dairy, but we suppose few have seen the plan in operation. We accidentally came across one on the farm of Mr. Edward Day a short time ago, and describe it for the benefit of our readers, that, from all the plans presented, they may find something to suit their peculiar situations, and also as an illustration of the theory referred to. This house is six feet wide, eight feet long and eleven feet deep, reached by two flights of stairs, and built beside a well, say forty feet deep. A box trough, 2 feet wide by a foot high, leads the cold air from the well, (eleven feet down), to the

bottom of the dairy house. The box lies in a horizontal position, is very short, only the distance from well-wall to the inside of the dairy house. It was dug down by a plumb line, floored and sided with plain boards; the distance from the surface ground to the plate is about six feet, to the comb of the roof about ten. This part above ground is loosely sided with the same kind of boards, and cost but a few dollars in labor and material to build the whole thing, as may readily be seen from the comparatively small amount of labor done and material employed. The temperatures, ascertained by ourselves with a double-sealed bulb thermometer, were as follows:

	F.
Bottom of dairy house, where the milk stands,	54°
Fresh drawn water from the well, - -	52°
Milk standing in crocks, - - -	55°

The 54° degrees was obtained right where the cold air from the well enters the house, through the box trough. These figures are given principally for the benefit of our investigating readers, who have made temperature, as it relates to dairy operations, a study, and these will at once see that the above temperatures are not only excellent, but all that is usually secured by spring water, and all this within a few feet of the house door. To those acquainted with temperatures, it is unnecessary to add that the butter kept in this house was hard, and calculated to bear long transportation to market, without diminution of its excellent qualities. So far as ventillation is concerned, a lighted match at the mouth of the box trough showed the inward flow of the cold air; the warmer rarified air of the upper strata, in the open top, would necessarily induce motion and the circuit would be complete. So far as the superiority of circulation and ventillation by pipes and valves is concerned; so far as the circulation in the house we have described is deficient in, that a dense and impure stratum of air would settle immovably to the bottom, we leave these points of objection and criticism to the Professor, giving above as a working exhibition of the theory of cold air, instead of cold water, for a dairy, especially where the latter cannot be obtained, and as offering many points of superiorty to other processes without water, we have described above, and also to many plans and houses in operation in which the water is at a great distance, and the house too cold in winter, and the water unreliable for constant success in butter making.

SUNFLOWERS.—A Southern bee-keeper claims the sunflower to be a large honey-producing plant, and recommends the pods, after the seeds are taken out, as excellent bee feeders.

DUTCH BULBS.

The fall of the year is the proper time to plant hyacinths, tulips and crocuses, which are the chief roots known as Dutch bulbs. In Holland, where they seem to grow to greater perfection than in any other part of the world, they are raised in a sort of black soil, reclaimed by draining from the sea. This is something similar to our salt marsh mud. It may be that a little salt mixed with a sandy soil would benefit these roots in our culture, but this is a mere suggestion, which, as the lawyers say, must be taken for what it is worth.

In regular garden experience these bulbs are found to do well in any rich garden soil. In planting they are set about two inches beneath the surface, with a little litter of some sort thrown over them to keep them from being drawn out by the frost in the winter season. The named kinds are, as a general thing, much the handsomest, and then they offer one a better chance to make a nice selection of various colors and shades. It requires more labor to keep these kinds separate and to name them afterwards, and so they are more costly than the mixed unnamed kinds. As a mere matter of quality, the unnamed ones are generally as good as those which are named, that is those which are sold as first quality roots.

The growth of hyacinths in pots and glasses of water is always of interest. Few things give more pleasure in the floral line than they do. The best results in this way are obtained when the roots are planted early in the fall, and set in as cool a place as possible, so as to give time to the roots to grow before the plants are introduced to warm rooms. If brought into these warm places before they have time to root well, their bloom is rather small. Those who grow them for forcing, and in these days of winter cut flowers, they have become popular with florists for this purpose, the best results are had from roots set singly in four inch pots at this season, and the pots plunged in sand in the open ground. If not put into too great a heat when taken into the house in October they will flower by Christmas, when flowers are in most demand. Others are kept in the pots buried in sand in cellars or sheds, where they can be got at easily in the frosty weather, and in this way they can be had to flower in succession all through the winter.

When in glasses they are not plunged, of course, but it is usual to keep them some time in cellars or closets, as the roots always grow best in the dark.

SWEDES FOR SHEEP.—English shepherds rarely feed ewes Swedes as the time of lambing approaches, because they produce inflammation and result in death of the ewes.

CAN ANTS TALK?

No one has studied the habits of "our six-legged rivals" without being impressed by their ability to communicate with each other, and the wide range of intelligence which they seem to able to convey. Information of common danger is quickly spread throughout colonies numbering many thousands, the news being brought by perhaps one or two spies. Hitherto their mode of communication has been a mystery, the most plausible hypothesis being that it was by a sort of fencing with their antennæ. Thus an ant returning from a foraging expedition meets another outward bound. They stop, strike antennæ together a few times, then proceed, No. 1 to the nest, No. 2 setting off on a new course and going straight to the place where No. 1 found her load. It would now appear that the striking of antennæ is merely a sort of salutation, as two neighbors might shake hands, while conversation goes on by other means. At any rate, according to the report of Professor Landois to the Natural History Society of Prussian Rhineland, they are provided with a sounding apparatus resembling that of the wasp. To have implies to use; and though its pitch is generally inaudible to human ears, its range of tone may be ample for a fully developed language. We say "generally inaudible," notwithstanding Professor Landois' belief that it is always so, having more than once noticed a faint strident, hissing sound proceeding from columns of large ants when annoyed. The next thing in order is an apparatus for making inaudible sounds audible, as invisible rays are made luminous; then some enterprising student may give us a comparative grammar of formic idioms.—*Scientific American.*

Sow Your Own Seeds.—Set out the very best specimens of beets, turnips, cabbage, carrots, and other vegetables early in the spring, to perfect their seeds for the next season's planting. Many dimes may be thus saved by a litttle care on the part of our readers. As a rule it is best to select the seed-plants in the autumn, and preserve them in a separate place until the time arrives to set them. The most perfect specimens should always be selected for this purpose, and by so doing the variety, under good culture, will tend to improve. Occasionally it may be well to import seed from distant localities, but with the proper care most seeds may be home raised to better advantage, and of a quality equal to any in the market. Seedmen's seeds are frequently better than home-raised, because this care in selecting and propagating is more frequently given.—*Peninsular News.*

Science Made Easy.

We extract from an article with this heading, a few paragraphs explanatory of Chemical terms, which will be useful to such of our readers as are not chemists. "A great number of substances, such as fats (tallow, lard, butter, etc.) woody fiber, straw, sugar, etc., are mainly made up of Carbon, Hydrogen, and Oxygen. These are sometimes, for short, called "*Carbo-Hydrates.*" The principal ones we have to do with in farming, and gardening, and feeding animals are:

Carbo-Hydrates:

Oils, Butter, Starch, Fats, Woody Fiber (or Cellulose), Gum, Tallow, Sugar.

The above substances contain little or no nitrogen in their pure state, and they are in Agricultural Chemistry, often called either *Carbo-Hydrates*, or non-nitrogenous substances.

There is another class in which Nitrogen is an essential part, such as lean flesh, or muscle, curd of milk, albumen or white of egg, etc. As *Albumen* is well known, and is found in many other things as well as in the white of eggs, those substances which contain nitrogen largely are called Albuminoids. Here is a list of a few of the

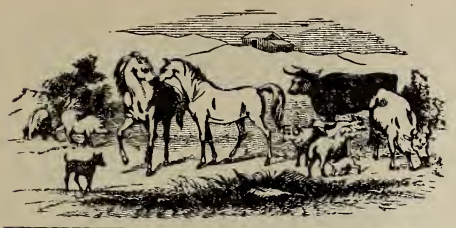
Albuminoids:

White of Eggs, or Albumen; Gelatine, or Glue; Curd of Milk, or Caseine; Gluten of Grain, or Muscle, or Lean Meat; "Wheat Gum;" Vegetable-Fibrine.

Cheap Vinegar.—Take a quantity of common Irish potatoes, wash them until they are thoroughly clean, place them in a large vessel and boil them until done. Drain off carefully the water that they were cooked in, straining it, if necessary, in order to remove every particle of the potato. Then put this potato-water in a jug or keg, which set near the stove, or in some place where it will be kept warm, and add one pound of sugar to about two and one-half gallons of the water, some hop yeast, or a small portion of whisky. Let it stand three or four weeks, and you will have excellent vinegar, at a cost of six or seven cents per gallon.—*Journal of Chemistry.*

Horses Feet in Summer.—To prevent horses feet from scaling or cracking in summer, and enabling the shoes to be carried a longer time without injury, the French practice is to coat the hoofs once a week with an ointment composed of equal proportions of soft fat, yellow wax, linseed oil, Venice turpentine and Norway tar; the wax is melted separately before mixing.

Live Stock Register.



COLT BREAKING.

During the last two months we have been stopping on a farm some five miles from town, and have had occasion to break four different horses to the saddle—the last one a wild colt. It is a little risky, unless one takes every advantage of the horse, instead of being taken advantage of by him. The nature of the horse we have made a practical study for many years. If only one side of a horse is trained, he will be as wild on the other side as though he never knew training. If you gentle three of his legs and neglect the other one, don't take hold of the uneducated leg too confidently. Every motion, every word that you wish the horse to know or be familiar with, must be gently but firmly. Get the horse's confidence first, then keep his confidence with kindness and consistent treatment; and remember that the horse knows what he learns, good or bad, and no more, and he remembers every trick, good or bad, also, that he learns. It is easier to educate a green colt than to break an old horse of bad faults.—*California Agriculturist.*

YOUNG STOCK WITH COWS.

Calves and yearlings that have not been so thoroughly weaned as to forget the cows, should never be allowed to run in pasture amongst them. We have lately had a little experience in this matter. Some young stock were turned among cows that we are milking, and among them happened to be some yearlings belonging to the cows. Although the cows had young calves, they recognized their own, and by licking and mooing about them, got the animals to sucking. As soon as we found it out the young stock were removed, but the cows held up their milk, disliked to be milked, and acted mean in every way. Before the young cattle had access to them they were models of kindness and content. The result is, they persist in bad behavior, and the milk has depreciated in quantity and quality, although they have good feed and treatment.—*California Agriculturist.*

Why Cattle Require Salt.

We know why the animal craves salt, and why it ultimately falls into disease if salt is for a time withheld. Upwards of half the saline matter of the blood, (57 per cent.), consists of common salt; and as this is partly discharged every day through the skin and kidneys, the necessity of continued supplies of it to the body becomes sufficiently obvious. The bile also contains soda as a special and indispensable constituent, and so do all the cartilages of the body. Therefore, if the supply of salt be stinted, neither will the bile be able properly to assist the digestion, nor the cartilages be built up again as they naturally waste.

And when we consider it to be a fact, that without salt man would miserably perish; as among horrible punishments entailing certain death, that of feeding culprits on saltless food is said to have prevailed in barbarous times, we may become partially convinced, at least, of the necessity of feeding salt to our stock—that it is one of the necessaries as well as one of the luxuries of life for man and beast; and it should be profusely provided at short intervals, in proper places, if it cannot be kept by them continually, so that each and every animal may satisfy the demands of his nature. Then it shall not be said of us, that while our pudding is well seasoned and salted, our stock are allowed to suffer for want of the same ingredient, which is as truly necessary for their food as for ours.—*Prof. Johnson.*

FEEDING SHORT-HORNS.

In a recent discussion at a meeting of English breeders on the management of short-horn cattle, the chairman said:—"One great fault in short-horn feeding has been that they had looked too much to beef and too little to milk. He had been grieved to see a short-horn heifer unable to bring up her calf, and to require an inferior animal to be used. Mr. Thomas Bates and other breeders used to boast about the milk as well as beef-producing qualities of their animals, but this was not so now. The object of early short-horns was not to have fashionable herds, but animals in the best condition; the miners and well paid artizans would not buy those great lumps of fat, but as prime mutton and beef as could be had. What the farmer now wanted was the class of stock fit to bring into the market as early as possible, and which would bring the greatest profit. What was wanted was to produce two-year old bullocks as prime as they formerly were at four years."

THE
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BALTIMORE, AUGUST 1, 1875.

To Subscribers in Arrears.

With this number we send out bills to our subscribers who have not remitted for the present year. There are also a few who are still further in arrears who will receive bills, to which we would call their special attention and prompt action. Our advertised terms are in *advance*, but in many cases we are not exacting, and therefore hope our friends will see the justice of making prompt remittance. It must be remembered that *we have prepaid the postage* on the *Farmer* since the new law went into effect, which, on our large edition, is a considerable item.

Maryland State Agricultural and Mechanical Association.

This society will hold its seventh annual fair at their fair grounds, *Pimlico*, near Baltimore, to commence on Tuesday, September 14th, 1875, and continue four days.

The premium lists are extensive, and the premiums are liberal. There will be on each of the last three days, trials of speed, including trotting, running and a grand steeple chase. In all, there will be six trials of speed, for which $4,300 are offered in premiums.

The improvements of the track by the jockey club, and of the grounds, buildings, &c., by the society; the improved facilities of reaching the grounds, the unusual zeal of the president, officers and members, with the evidently lately added interest in its welfare, which has marked the monthly meetings of the society, are hopeful evidences that the next fair will be highly successful, and that the great number of exhibitors will not be disappointed by finding only a limited number of spectators to appreciate their fine stock, or the evidences of their skill or industry.

We should be glad to see a great out-pouring of the people of Maryland on this occasion, inasmuch as we look upon this institution as of vast importance to the agricultural interests of the State, and of great value pecuniarily to Baltimore; hence it should be patronized and warmly sustained by all classes of the town as well as of the country.

Gov. Gilbert C. Walker, of Virginia, has accepted the invitation of the society to deliver the annual address at the September exhibition at Pimlico. The reputation of this gentleman, as one of Virginia's best orators, will add much to the interest of the occasion.

Specimen Copies.—Parties writing for specimen copies of the MARYLAND FARMER will please enclose a three cent stamp, as we are compelled to prepay postage in accordance with the new law. There are a large number sent out, which makes it a considerable item of expense.

To Postmasters and others.—A liberal discount will be allowed Postmasters and others who will interest themselves in receiving subscribers. Where *five* or more subscriptions are sent, they will be furnished at $1 each, we paying the postage. Specimen copies will be sent free to all who desire to solicit subscriptions.

Rub the buckwheat cake griddle with half a turnip, to make the cakes come off nicely. This is better than fat.

Maryland Agricultural College---Election of a President---Wm. H. Parker.

The trustees of the Maryland Agricultural College held a meeting on July 15th, in this city, which was attended by the following trustees:

James T. Earle, of Queen Anne's county; John F. Lee, of Prince George's county; Ezra Whitman, of Baltimore; J. Howard McHenry, of Baltimore county; E. L. F. Hardcastle, of Talbot county; Chas. B. Calvert, of Prince George's county, and Allen E. Dodge, of Washington, D. C., on the part of the stockholders; John Lee Carroll, Prof. M. A. Newell and Dr. Samuel Kepler, on the part of the State. Jas. T. Earle presided, and J. Howard McHenry, Secretary.

Gen. Samuel Jones, late President, having declined a re-election, William H. Parker, late Professor of Mathematics in the College, was selected as President of the Faculty. This gentleman graduated at the Naval Academy in 1848, with honors, and after several years of promiscuous service, was appointed, in 1853, Assistant Professor of Mathematics and Astronomy at the Naval Academy, which position he occupied until 1857, when he was ordered to sea; when, on his return, he was again installed in his old position as Assistant Professor. At the breaking out of the late war he resigned his commission and accepted a commission in the Confederate Navy, and was soon after appointed Superintendent of the Confederate Naval Academy, which he organized and put in successful operation, and, at the close of the war, had some seventy students and fifteen professors under him. After the Confederacy went under, he entered the service of the Pacific Mail Steamship Company, and for eight years commanded one of their largest steamers, which service he resigned in the year 1873, and more recently was engaged in the qualifying of young men for entrance into the Naval Academy of the United States. He is said to be eminently qualified to discharge the duties of the position which has been assigned him by the trustees. His text-books are still authorities, his surveys in the Pacific since the war have been highly commended, and with his fine education and peculiar gifts, we have no doubt he will bring our Maryland College up to a high standard of excellence.

The new President, upon his election, was authorized, in connection with the executive committee, consisting of Allen E. Dodge, Ezra Whitman and Charles B. Calvert, to appoint a competent faculty and prepare a curriculum and plan for the future conducting of the College, the same to be submitted at the next quarterly meeting of the Board of Trustees, to be held on the 15th September, for their approval and concurrence.

A report of the executive committee was submitted, showing the financial condition of the College. The indebtedness of the institution is $10,000, and the committee recommend that the State appropriation of $6,000, due next February, be applied to a reduction of the same.

The report stated that the income of the College, derived from its endowment, with the State appropriation of this year, would be sufficient to defray current expenses, without taking into account any income to be derived from students. It was prodosed to engage distinguished professors during the year to deliver lectures on special agricultural subjects before the students.

Lexington Dead.—On the 1st of July this famous race horse and sire died at Woodburn, Kentucky. His achievements and the successes of his get on the turf, are probably not surpassed by any horse of the age. He was foaled in 1850, and in 1855 withdrawn from the turf; was then purchased by Robert A. Alexander, of Kentucky, from Ten Broeck, for $15,000. Ridiculed for paying such an extraordinary price, he replied, "that the day would come when he would sell one offspring of the horse they despised for more money than he had paid for him." When, a few years ago, Lexington's son Norfolk won the two stakes for three-year-olds, at St. Louis, in May, 1864, and the colt's price was asked by Theodore Winters, of California, Mr. Alexander replied, "nothing less than $15,001." The price was given, and the Kentucky breeder was enabled to congratulate himself. Since that time another son of Lexington, named Kentucky, has been sold for $40,000, and double that amount would not have purchased Tom Bowling, the greatest of his progeny.

Sales of Land in Talbot County, Maryland.—According to a list of land sales furnished by Mr. J. F. Mancha, real estate agent at Easton, there have been more farms sold in that county, in the past ten months, than has been sold in that many years previous. The number of farms sold is 41, aggregating 5,138 acres—prices ranging from $700 to $33,000—total paid $178,910. Of the purchasers, 15 are from Pennsylvania, 12 from New York, 5 from Ohio, 2 from Connecticut, 2 from Canada, 1 from Kansas, 1 from Mississippi, 1 from Michigan, 1 from New Jersey, and 1 from Montana Territory.

Cement for sealing fruit cans is made of rosin one pound, tallow one ounce.

WHY GO WEST?

In a former number of the *Farmer*, we wrote at some length in support of the idea that a large majority of English emigrants, when they arrive in this country, especially those reared to rural pursuits, would be infinitely better off to settle in the Atlantic States than to go West, whether to well settled, older districts of Western States or to the frontier. We gave good and sufficient reasons for what we recommended.

We find in the last report of the New Jersey State Agricultural Society, an article on "*New Jersey as compared with the West for Foreign Emigrants*," by Charles K. Landis, Esq., of Vineland, N. J., from which we might extract, largely, matter that would be useful to all our readers, but are compelled to confine ourselves to the arbitrary bounds of our space.

Mr. Landis has compiled from the reports of the Commissioner of Agriculture, what we give in his own language, and cordially invite the attention of our readers to it.

The deduction that every intelligent reader will draw, cannot but be convincing and fully corroboratory of the ground that we have previously taken.

AGRICULTURAL STATISTICS.

"I will now give some practical statistics of the amount and value of productions in the East and in the West, as effecting the farmer, gardener and fruit grower.

According to the report of the Department of Agriculture for 1873, in the West, including Ohio, Michigan, Indiana, Illinois, Wisconsin, Minnesota, Iowa, Missouri, Kansas and Nebraska, the average yield and value of cereals and potatoes are as follows:

	Ind. Corn.	Wheat.	Rye.	Oats.
Bushels per acre,	30	13.9	14.9	30.2
Value per bush.	$0.37	$1.10	$1.04	$0.61
Value per acre,	11.22	14.45	9.08	9.09

	Barley.	Buckwheat.	Potatoes.
Bushels per acre,	23.5	12.0	63.6
Value per bush.	$1.10	$0.88	$0.87
Value per acre,	20.68	10.20	55.33

Whereas, according to the same authority, the average yield and value of the same crops in New Jersey was as follows:

	Ind. Corn.	Wheat.	Rye.	Oats.
Bushels per acre,	36	16.2	14.1	26.5
Value per bush.	$0.62	$1.65	$0.85	$0.49
Value per acre,	22.32	26.73	12.98	12.98

	Barley	Buckwheat	Potatoes.
Bushels per acre,	24.	16.5	90.
Value per bush.	$1.10	$0.96	$0.67
Value per acre,	26.40	15.84	60.30

It will thus be seen that the value per acre of the above named crops in New Jersey, exceeds the value per acre of the same products in the West by the following sums:

Excess of annual production per acre in New Jersey over the West:—Indian Corn, $11.10; Wheat, $12.28; Rye, $3.90; Oats, $3.89; Barley, $5.72; Buckwheat, $5.64; Potatoes, $4.97.

Taking the above sums in excess as annual interests at 6 per cent., on actual capital, it will further be seen that the virtual value of an acre of land in New Jersey, over and above the value of the same area "out West," for raising the different products named, is as follows:

Excess of value of an acre of land in New Jersey over the West, for raising the following products:—Indian Corn, $185.00; Wheat, 204.66; Rye, $65.00; Oats, $64.83; Barley, $5.72; Buckwheat, $5.64; Potatoes, $4.97.

Potatoes, the past year, were exceptionally high in the West, but let it have the benefit.

Finally, it will be seen that the *average* excess of the value of land in New Jersey over the West, for raising all of the above named products together, is the sum of $76.55 per acre.

New Jersey is very favorably surrounded by great markets, but no more favorably situated in this regard, than many portions of Maryland, the District of Columbia, Virginia and other States. We would that the data presented in the above, could be intelligibly placed before emigrants who are small farmers and gardeners, as they land on our shore; that they might locate where all surrounding circumstances will be more conducive to their interests and happiness than the West.

THE HEADQUARTERS OF THE NATIONAL GRANGE of the Patrons of Husbandry have been removed from Washington, D. C. to Louisville, Ky. The official report of the Secretary shows the Order to be in a flourishing condition, there being 23,500 subordinate lodges, with a membership of $1,500,000. The Order has $69,000 invested in Government bonds, and $19,000 on deposit in New York.

ADDRESS OF JAMES ALFRED PEARCE, ESQ.—We are sure our readers will pardon us for the space we occupy in the present number with the very neat and appropriate address, delivered recently before the Kent County Agricultural Club, by one of old Kent's gifted sons.

The attention of Farmers and Gardeners is called to the advertisement of Peruvian Guano of Hobson, Hurtado & Co., New York, and the reduction in price to $60 per ton currency, instead of gold, a difference of nearly 18 per cent.

THE PEACH CROP.

The indications are that the crop of the present season will exceed, by far, any crop ever realized in this country. And the producers are energetically at work to provide facilities for speedy transportation of their crops to all parts of this country, as well as to Europe—the various railroads and steamboat lines connecting with the great peach producing latitude, are being consulted and arranged with to transport the millions of baskets to remote points and at reasonable rates. Particular care is being exercised to provide cars so arranged as to prevent bruising the fruit.

The estimate of the crop in the counties along the Delaware Branch Railroad, is 4,513,000 baskets, while the largest crop produced in any former season in the same section was 2,211,500 baskets. Along the roads connecting with the Delaware Railroad, it is estimated that the crop will amount to 1,928,000 baskets, making a total of 6,441,000 baskets, which is more than treble the amount produced in any previous year. In fact the Peach Growers' Convention, which met June 25th, estimated the crop at near 10,000,000 of baskets. Besides this, the peach crop in New Jersey, and in sections which have not shipped any great quantity in past years, promise an extraordinary harvest.

At a meeting of the Peach Growers' Convention, held July 17th, at Middletown, Delaware, the committee appointed to visit Baltimore, and confer with the officials of the Baltimore and Ohio Railroad Company as to tariff and time over that road to Western cities, made a report. The committee had conferred with Mr. Sharp, master of transportation, who had exhibited to them the cars which the company had prepared. The cars were well ventilated, but smaller than the Philadelphia, Wilmington and Baltimore cars, holding only 456 baskets, or 14,000, one-eighth less than those of the Philadelphia, Wilmington and Baltimore. The company declined to take less then $224 per car to Cincinnati, as the cost of the construction of the cars and the rapid rate of speed, they could not, in justice to themselves, charge a less rate. The cost from Baltimore to Middletown, the committee stated, would be $36.10, making a total tariff of $260 a car to Cincinnati. The trains would leave Middletown at 7 o'clock P. M., and arrive in Baltimore at 1 o'clock the following morning, and in Cincinnati at 1 o'clock P. M., Louisville and Indianapolis at 6 o'clock P. M. second day.

The convention, after discussion, accepted the report of the committee, and enough cars were guaranteed to make a daily train over the Baltimore and Ohio Railroad.

The committee which had been appointed to go to Philadelphia and confer with the American Steamship Company, relative to the fitting out of their vessels with refrigerators, for the shipment of peaches to Liverpool, reported that they had called upon the authorities of the company, and they favored the project. The company would allow the growers to fit up the steerage forward cabin with their refrigerators, which can be done with $500 for each vessel. This portion of the ship would hold 25,000 or 30,000 baskets, and a compartment immediately underneath could be fitted up, which would carry 6,000 additional. The company would charge the growers for the shipment of this amount of fruit to Liverpool about $2,000, and give them the privilege of sending out an agent free of charge with each consignment. The officials stated that a mean temperature of 50° was always kept at sea, and that the cost of ice would, for this reason, be less.

The convention accepted the report of the committee, and added H. N. Willetts to it, and they were instructed to go to Philadelphia and have a further conference with the company, and to report to the next meeting the cost and probable risk of the venture. The growers looked with much favor upon the proposition of the steamship company, and the prospect of a European route via Liverpool is quite flattering.

The freezing establishment, commenced at Middletown, is being rapidly pushed forward, and will be completed in about four weeks.

The growers and shippers of the peninsula have, up to the present time, contracted for the use of 1,150 cars for the shipment of fruit to New York, and some have also been contracted for for Philadelphia, and provision for shipment over other roads has been provided for, so that it is probable that at least 1,400 cars are already engaged.

It is calculated that the expense of transporting peaches to the large Western cities, under arrangement, will range from 50 to 85 cents a box, and, as the Western peach crop is almost an entire failure, it is considered that the enterprize will be a paying one to our peach growers. The prices at which they can be disposed of to consumers in the Western cities will be such as to induce a large and lucrative trade—profitable to the producer and a blessing to the consumer.

To each bowl of starch, before boiling, add a teaspoonful of Epsom salts. Articles prepared with this will be stiffer and, in a measure, fireproof.

THE CROP OF PEACHES.

In spite of the unfavorable reports which reached us a while ago, as to the prospects of the peach crop, and the destruction which had been wrought by the inclement weather at the blossoming period, the supply of fruit from Delaware, Maryland and Southern New Jersey, the great peach-producing regions, will, without doubt, be unprecedently large, reaching between 6,000,000 and 8,000,000 baskets, or double the number ever gathered in Delaware and Maryland. This great increase is due to the fact that this year as many as a million fresh trees have come into bearing, while the yield is so abundant that every tree will, it is supposed, average a basket more than usual. The crop will flow into the market during the three months following about the middle of July, and beyond any former experience, peaches will be plentiful. The trouble with the peach growers now is how they may profit by this abundance, there being great likelihood that the market will be overstocked. Meetings have been held to consider the best means of making the crop a remunerative one, and the conclusion has been arrived at that, as the hitherto existing markets will be insufficient to provide an outlet for their product, new markets must be sought this year, Contracts have already been entered into with a number of peach-cannig firms to furnish at $2 25 the same quantity that last year was paid $3 50 for. One important item may be mentioned which may have some effect upon the market. A new process of freezing fruit is said to have been devised, and a committee is anxiously watching its experimental operations in New York. By means of this system, fruit may be kept in a perfect state for any length of time, and if it were possible to transport the fruit uninjured across the Atlantic, there is no doubt that this country might be relieved of its surplus stock at remunerative prices. Some plan of this sort, to extend the supply over a greater length of time, would naturally maintain prices somewhat; we must, however, see it in operation to be assured of its success. A resolution of the Delaware Fruit Growers' Association, with a view to keeping up fair prices, advocates a large reduction in freights, the opening of new markets, and the shipping of only choice fruit.

The large supply of fruit will entail for its shipment an immense number of packages, and as many as 1,000,000 new baskets and 500,000 crates, it is estimated, will be required. These are being made at Middletown and other places in the State of Delaware, at the rate of 15,000 baskets per day, and costing from 11c. to 15c. each. Prices for freight have not as yet been agreed on, nor have the receivers arrived at an approximate idea of the rates at which they will be enabled to sell. The price will depend more upon the quantity of the daily supply than upon the general average of the crop. Besides this, the state of the weather during shipment and at the time of arrival, will exercise a considerable influence, as a few hours of warm, wet weather will ruin a whole shipment.

Arrangements are being made for opening a route on the North Pennsylvania, the Lehigh Valley and other roads, via Binghamton, to Albany and Boston, which, it is thought, will greatly relieve the New York market. Likewise, fruit cars will run to Pittsburg, Harrisburg, Reading and other points in Pennsylvania. The cheapness and plentifulness of peaches will, no doubt, be conducive to the public health. They are a most wholesome fruit, and if freely eaten during the hot weeks of summer, will prevent the occurrence of much sickness.—*The American Grocer, New York.*

OLEOMARGARINE.

Oleomargarine is an artificial butter that is extensively used in Europe, and much of it finds its way into the New York market. The process of making it was first discovered by a French chemist during the Franco-Prussian war and was patented. The process is substantially as follows:

It is made principally from fat taken from beeves. This fat is put into cold water, thoroughly washed, and the animal heat taken from it. After this, it is cut into fine pieces with a knife and run through a perforated plate, which pulverizes it. The fat is then placed in the rendering kettles and slowly heated until the oil and stearine are separated from the membranes. The oil and stearine are drawn off into coolers, and when in a proper consistency for pressing, put into bags of two and three pounds each. These bags are then placed into a powerful press—200 tons power—and the oil is separated from the stearine, the latter remaining in the bags. The oil, with one-third as much milk, is then churned into butter, which is afterwards worked, salted and packed in the same manner as the ordinary article. From every 100 lbs. of fat, 65 lbs. of oleomargarine and 25 lbs. of stearine are obtained.

There is now in operation in Brooklyn a large factory that yields a large amount of the oleomargarine that is sold at a large profit, and is eaten by the hotel guests as the genuine article. There is also a large factory in Charlestown, Mass., which turns out a large quantity of this article and meets a ready sale.

Advantages of Concentrated Manures.

The editor of the *Massachusetts Ploughman* says:

One of the advantages of the use of concentrated fertilizers, is that they are free from the seeds of innumerable weeds, with which our stable manures are usually filled, and, though we would not recommend the indiscriminate use of these substances as substitutes for barnyard manure, there is no question that if they can be got pure and honestly made, this freedom from vile seeds is worth careful consideration. A judicious practical farmer puts it in this way: "Twenty loads of barnyard manure," says he, "is worth $40, and costs the farmer perhaps twice that sum in the consumption of hay by the necessary number of cattle, over and above their winter product of milk, even if the cattle are not dry during that season. These twenty loads, worth $40, will fertilize but an acre of land, while half that sum will furnish a manufactured fertilizer of equal potency, the labor of applying which will save at least five dollars more. The freedom from wild carrots, dock, Canada thistles, and other noxious weeds, is a further consideration in favor of this concentrated manure over the crude article of the barnyard. Calico printers for many years used the solid excrement of the cow to brighten and fast colors in cotton cloth. Some latent quality was ascribed to the living animal, till it was discovered that a mixture of phosphate of soda and some other chemical salt answered the same purpose, and was more cleanly, economical and convenient in application. Peruvian bark, for many centuries, was regarded as the only cure for fever, and the poor patient was compelled, under the direction of the family physician, to drug his port wine with this nauseous and bulky remedy; but medical and chemical science discovered that the curative principle of this bark consisted of the quinine to be extracted from it, and the useless woody fibre is now dispensed with. Agricultural chemistry has discovered that the larger part of the bulky and useless portions of barnyard manure may be dispensed with, and the fertilizing value is thereby reduced to a few chemical elements which furnish food for plants or produce soluble action in certain ingredients of the common soil. Guano, bone dust, phosphate of lime and gypsum, constitute important representatives of the fertilizing qualities needed, and when we reflect that but one-fortieth the weight of even the much valued horse manure, when reduced to fertilizing matter, we are irresistibly driven to the belief that a corresponding reform in fertilizing land is as necessary in agriculture as the introduction of minute doses of quinine to cure the fever, instead of filling the patient's stomach with bushels of Peruvian bark. If science was permitted to do for farming what it has done for manufacturing and other occupations in this commonwealth, our lands would double in value and in products."

THE WHEAT CROP.—The returns of the Department of Agriculture for July show the condition of spring and winter wheat together at about 82 per cent. of an average; winter wheat, including California, average 74, and spring wheat 96. The spring wheat States in the Northeast and Northwest are generally in high condition. Of the winter wheat area the South Atlantic and Gulf States are generally above average, but in the Middle States the condition is very low, New York ranging down to 45. West of the Alleghanies the prospect is better, the State averages being between 71 in Ohio and 95 in Iowa. California reports winter wheat at 76 and spring wheat at 55.

FINE WHEAT.—Dr. E. Hall Richardson, has left at our office, says the *Aegis*, a sample of wheat raised by him, which is very fine indeed. It is known as the Clawson variety, the seed having been obtained in Geneva, N. Y. It is a white wheat, with red chaff and smooth beard. The Dr. believes it will yield thirty-five bushels to the acre. The Dr. raised, this season, a beardless white wheat, called the Wells, which yields about thirty bushels to the acre, and was introduced into Harford county by Col. Webster, from Aurora, New York.

Henry W. Archer, Esq., has also showed us some heads of wheat, called the Georgia White, raised by O. H. Perry, of Kentucky. They measure fully six inches each in length, and are exceedingly well filled.

LARGE YIELD OF WHEAT.—We learn, says the *Transcript*, that Col. Edw. Wilkins, on his "Riverside" farm, raised this season, on a fifteen acre lot, five hundred bushels of Fultz wheat, and this too, without using any kind of fertilizer.

Some Facts in Soil Culture.

A fact not generally understood is that soil, in a finely pulverized state, holds more moisture—hydroscopic water—than when in a solid state. A single experiment will show this. A field plowed in the fall will retain a larger amount of moisture in the spring than if it were left unplowed.

Finely pulverized soil, when in a dry state, takes up moisture equally from the air, and with it large quantities of nitrogen compounds. Thus porus soils, because cool, are constantly condensing water during drouths, and hold the constituents it contains to be taken up by the rootlets, and assimilated by plants. Soils thoroughly underdrained, when allowed to rest, become honey-combed by insects to the water line occupied by the drains, and hence these serve as channels to quickly conduct the rain which falls immediately away. This, however, is not what is wanted, for thus the fertilizing properties in the rain water do not come intimately in contact with the soil, and are lost; thus the error into which certain superficial experimentors have been led, in supposing that drained lands would not stand drouth. If the surface soil were pulverized to a depth of from six to ten inches or more, the case would be very different. It would then act as a filter, passing the water off more slowly, but still fast enough, and, in addition, the elements of fertility would be retained, and the whole area of the soil uniformly moistened.

Again, underdrained soils liable to become water soaked, become hard and impacted. Insects do not penetrate to any considerable depth, and the soil holds water like a dish, to be slowly evaporated by the sun, rendering it, by this very process, cold, sour and unfertile. So also tilth and drainage prevents the washing away of fertilizing properties during continued rains; the moisture is absorbed and passed down through the soil, instead of running along the surface and thence into the nearest stream, carrying with it not only its own fertilization, but also the soil itself, which it mechanically acquires and holds until the water again becomes quiescent.

There is a wild field for thought and investigation here, and one that will repay the study bestowed upon it. We do not believe in the theory that soils run out. They more often become impoverished and infertile from gross mismanagement than from actual wearing out. For, the conditions being right, they have the power to constantly reacquire what was lost.—*Western Farm Journal.*

The Cheese Industry.

According to the *American Grocer*, New York, the cheese industry is in danger of ruin, and the only salvation, it is said, is to abandon the manufacture of every quality except full cream cheese, which is the only kind entitled to the designation of cheese. So-called cheese is made of every gradation of quality, from the poorest skimmed to the richest full creamed cheese, and sells in the market from 2 cents to 13½ cents a pound. If the milk is all skimmed, the poorest product is the result, and this quality proves an exceedingly unprofitable manufacture, as it costs to make and sell it at least three cents a pound, and nets a loss of one cent a pound. The next quality above, with five per cent. of cream, and made of good texture and properly colored, brings a relatively higher price; and so on for all gradations of quality until when the cheese is made with a mixture of morning milk skimmed and evening milk unskimmed, in equal quantities, an article may be produced by proper care that will pass very well with those who are not experts for a full cream cheese. Then comes in the oleomargarine cheese, the cream all taken off, and the oil called oleomargarine, from the fresh fat of the caul of an ox, substituted in equal weight for the cream. This produces an article which, in many respects, so closely resembles the full cream cheese as to be readily sold for it.

Last year skimmed milk cheese sold very well up to the best grades. This year they can hardly be sold at all, from which it appears that, after all, cheating don't pay. All who are interested in the export trade, and nearly every receiver is, tells us that the presence of adulterated cheese in the English market is being felt here, and that it is absolutely certain, if their manufacture and shipment is persisted in, will react disastrously upon our cheese trade, and ultimately to drive us out of a market that has cost us so many years and so much labor to establish. Of the 1,905,978 cheese received during the year ending May 31 last, 1,701,328 were exported, leaving 204,650 for home consumption, about 9 per cent. of the total receipts. Figures like these show the importance of sending good cheese abroad.

THE great trees of California are not found in any other country excepting where they have been recently propagated. They belong to the general cypress family. These redwood trees are remarkable for their *isolation*. They are isolated systematically, and extremely isolated geographically. They seem to have been created local and lonely denizens of California only.

Australian Wheat.

Alderman Mechi writes as follows to the *Agricultural Gazette* :—

At various times I have sown among my own wheat crops portions of fine wheat sent to me for trial from Australia. In every case, the plants, just before development have become blighted and worthless, although the home-grown wheats, within a few inches of them, came to perfection. This puzzled me extremely, seeing that the Australian samples were of the finest quality. I then remembered that our own wheat had, before being sown, been steeped in a solution of blue stone, (sulphate of copper), which prevents blight, and that we had omitted to do this with the samples of Australian wheat, but we did steep the last sample, which is now in full ear, without any symptom of blight or disease. It is fully ten days forwarder than our own wheat growing near it, although sown the same day.

As we hear of such ruinous losses by blight in our colonies, I think it most important that the steeping process should be there generally adopted, as it is by all good farmers in this country. We use 1 lb. of sulphate of copper to 10 quarts of water; the wheat is steeped in this for ten minutes and well stirred, or the wheat is put on a floor and saturated with this solution. Whenever we have omitted to steep the grain, the crop has proved more or less blighted or smutty.

I am sorry I did not leave a portion of the Australian wheat unsteeped: this should be done as a comparative test. The saving of a fortnight in time in late districts would be a considerable advantage. The wheat was sown the last week in November. It looks a promising well-developed crop. This wheat tillers rather less abundantly than home-grown, but would probably become more vigorous by acclimatisation.

MANURE FOR FRUIT.—It would be best to abstain from the use of stimulating animal manures for your fruit trees, unless thoroughly decomposed, and if previously composted with mellow soil, all the better; but mineral fertilizers will, in such cases, always prove more trustworthy. Nothing is better than wood ashes to induce a sound, healthy growth, and consequently perfect fruit crops. The scrapings from wood piles, if mixed with the ashes, will, of course, be beneficial, and decayed leaves, peat, washings from the road, etc., are all of value. Our orchardists, as a rule, are at last realizing the truth that they must not use too speedy and powerful manures, as such will, in most cases, prove injurious to vegetation in one form or another.

Hungarian Grass.

An esteemed correspondent and subscriber at "Edgehill," says the *Prince Georgian*, sends us a sample of hungarian grass, which may be seen at this office. It is of very luxuriant growth—measuring over four feet in heighth—and said to be very succulent. But we will let our correspondent tell his own story, as we incline to the opinion that he understands the subject better than we do:

MR. TURNER—*Dear Sir*:—I send you a sample of hungarian grass, the seed of which was sown fifty-one days since. Good judges estimate the yield at two-and-a-half tons per acre. It can be cut, cured and harvested at a cost of $2 per ton. Thus you perceive that if the farmers of this county would first take the *The Prince Georgian* and next the advice of "Patuxent Planter," and sow a few acres in hungarian, there would be no lack of good hay for feed. I would give my mode of culture if I thought it would do any good; but if they hear not Moses and the Prophets, neither will they be persuaded though one should admonish them from EDGEHILL.

MONTGOMERY COUNTY FAIR.—The executive has decided to hold the next fair on the 8th, 9th and 10th of September, 1875. A premium of $500 is to be offered for the fastest trotting horse, mare or gelding—open to all—inside or outside the State. The fair to be held at Rockville.

THE FREDERICK FAIR.—The fifteenth annual exhibition of the Frederick County, Maryland, Agricultural Society will be held at the fair grounds, Frederick, Md., commencing October 12 and continuing four days. HON. ALLEN THURMAN, of Ohio, will deliver the annual address.

State Fairs for 1875.

Illinois	Ottawa	Sept. 13—18
Ohio	Columbus	Sept. 6—10
Indiana	Indianapolis	Sept. 27—Oct. 2
Iowa	Keokuk	Sept. 27—Oct. 2
Wisconsin	Milwaukee	Sept. 6—11
Nebraska	Omaha	Sept. 21—24
Michigan	East Saginaw	Sept. 13—17
Minnesota	St. Paul	Sept. 14—17
California	Sacramento	Sept. 15—25
Colorado	Denver	Sept. 21—25
St. Louis Fair		Oct. 4—9
Cincinnati Industrial		Sept. 9—Oct. 9
Connecticut	Hartford	Oct. 5—8
Georgia	Macon	Sept. 18—25
Maine	Portland	Sept. 21—24
Maryland	Pimlico, Baltimore	Sept. 14—17
Massachusetts Hort.	Boston	Sept. 21—24
Montana	Helena	Sept. 27—Oct. 2
New England	Manchester, N. H.	Sept. 7—10
New Hampshire	Manchester	Sept. 7—10
New Jersey	Waverley	Sept. 20—24
New York	Elmira	Sept. 27—Oct. 1
Oregon	Salem	Oct. 11—16
Pennsylvania	Harrisburg	Sept 27—29
Rhode Island	Cranston, Providence	Oct. 5—7
Virginia	Richmond	Oct. 26—30
West Virginia	Clarksburg	Sept. 7—9
Md. Horticultural	Baltimore	Sept. 22—24

THE APIARY.

REMOVING BEES.

The most favorable time to remove hives of bees is in the autumn, or the early spring. Some writers will tell you that the hive must be suspended on a pole, and carried on men's shoulders. But my plan is to provide myself with pieces of packing wrapper three feet square; one of these I spread on the ground, near the hive which is to be removed; I then give a few puffs of tobacco-smoke in to the entrance, to drive the bees from the floor-board into the upper part of the hive; then take the hive without the floor-board, and place it on the cloth, the corners of which pull close up to the sides of the hive, and bind strong strings several times round it, to secure the wrapper. This entirely prevents the escape of a single bee; then turn the hive crown downwards, which saves the combs from becoming displaced, as well as giving a plentiful supply of air through the canvas.

I packed sixteen hives of bees in this way last autumn by daylight, loaded them in a spring van, and drove them a distance of ten miles, without causing them the slightest damage in any way.

When I reached the garden in which I wished to place them, I found the bees were clustering in great numbers on the covering; so that, instead of removing it at once, I first placed the hive, canvas and all, on the block, then unfastened the string round the hive, allowing the ends of the wrapper to fall down, so that the bees had a free passage in and out of the hive; and, in a few days, when the bees had become accustomed to the place, I drew out the canvas from between the hive and block without causing any annoyance to them.

Should you purchase young swarms from a distance, they must be removed the same day on which they swarmed, or be left for removal until the autumn; for, should the hive be taken away when only partly filled with comb, the excitement of the bees will be so great, and the temperature of the hive will be raised so much, that the combs will give way from the top, and bees, honeycomb and all, will fall in one confused mass, to the ruin of the swarm.—J. W. PADGEN.

UNITING SWARMS.

This, in the swarming season, is a very easy matter to accomplish. Should you have two swarms on the same day, and wish to join them, first lay down two stout sticks nine inches apart, take one of the hives and knock on the ground two or three times, until the bees are all shaken out of the hive; then sprinkle them quickly with thin syrup, place the hive with the other swarms on the stick over those shaken from the ground for the night, and the next morning they will be found peaceably united in one happy family. One of the queens will be found dead on the ground, as two queens are never at any time allowed to occupy the same hive.

Should one hive have been occupied by a swarm two or three weeks even, they quite as readily welcome the addition of another fresh taken one; and when they have done so, it is astonishing the rapidity with which they fill their hive, as well as a super on the top. Any late swarms cannot be more profitably appropriated to any other purpose. This operation must be performed in the evening, and it is well to remove the hive on to a stand very early the following morning, after the union has been completed.—J. W. PAGDEN.

FRUIT CULTURE IN THE UNITED STATES.—F. R. Elliott, a writer on agriculture, has been collecting certain data in regard to fruit culture, and gives the total market value of the crop of the entire country at $47,000,000. New York leads all the States in amount with $7,000,000. California's figures are largest in proportion to population, being $6,000,000, this sum probably including the yield from vineyards. The total sum for the New England States is put at $6,000,000, the individual States not being itemized.

FINE IMPORTED SHEEP.—The steamship Scandinavian, from Liverpool, which arrived at this port July 4th last, brought twenty-three thoroughbred sheep, from Great Britain, for gentlemen in Virginia. A. P. Gordon Cummings, at Drury Farm, White Sulphur Springs, Va., received fourteen, six Leicesters and eight Lincolns. The other nine sheep are for a Mr. Carswell, of Bowling Green, Caroline County, Va. They are premium animals, several of them having won prizes. They all landed safe and sound.

HON. HORACE CAPRON, formerly Commissioner Agriculture, who went to Japan some three years since, to organize an Agricultural Department for that nation, has returned to the United States. His many friends will welcome his return home to the United States.

LEHIGH VALLEY POULTRY ASSOCIATION.—The Second Annual Exhibition of this Society will be held at Allentown, Pa., commencing December 28th, 1875, closing January 3d, 1876. The premiums offered are very liberal. For list of premiums, &c, address T. James Ruke, Secretary, Allentown, Pa.

HORTICULTURE.

Fall Culture of the Strawberry.

In reading what our best growers have to say about strawberry culture, we note that most of their references are to spring and summer necessities, and very little as to what may be done in the fall, yet there is very much which may be done late in the season, to great advantage, that very seldom is done.

Supposing, for instance, that the plants are grown in beds three or four feet wide, as they often are, one is apt to think his duty to the plants completed when he keeps the beds clear of weeds; but there should be, at the same time, an unmerciful weeding out of plants—unmerciful to the large number destroyed, but it is a great mercy to those which remain. If they could be so thinned as to leave only the strong, young plants, and these say about four inches apart on an average, it would nearly double the crop the next season. There are many who think this extra labor does not pay. They know the crop is increased by the additional attention, but not enough to pay for it. They think that the smallest amount of labor possible, without regard to the product, pays best. That is, of course, so that there is a moderate crop of some kind. This, however, is not the experience of our best growers. Those who have become rich at the business, tell us that the more labor they put on their crops—labor of course used with judgment—the better has it been for them. There have been some who, cultivating their plants in rows, have thought they found a profit in cutting off all the runners. It is likely that larger and finer fruit may be obtained in this way, but there is the disadvantage of the fruit lying on the earth, making it disagreeably dirty, and this has to be guarded against, in such cases, by an addition of straw or some material of that character. It is best, on the whole, we think, to leave the runners between the rows, so as to make a bed for the fruit to lie on, but between the rows we should cut away, even up to frost.

Some writers recommend planting in August or September, but we think this hardly pays, except in cases where it is desirable to increase a kind very rapidly. Plants get a root hold before winter, and are then ready to push out into a strong growth in spring. It also affords a chance to test some unknown kind, to a certain extent, earlier than any other way. The runners set out and cared for early in fall, will make tolerably fair crops the next spring, and, though not abundantly fruitful enough to be profitable, are yet sufficiently so to give one some idea of the value of the kind. In this, and similar ways, the horticulturist may find judicious work to do at this season in even so tame a subject as the strawberry bed.

THE PEACH GROWERS' PROFITS.

A daily newspaper tells us that when the peach growers have no peaches they grumble, and when they have good crops they grumble more. But it congratulates its readers, that whatever may be the woes of the growers, peaches will be abundant and cheap, and that it is of little consequence whether the peach growers make anything or not, so long as the great public profit by the superabundance of fruit.

It is unfortunate that great papers, which lead public opinion, can see no deeper into the sources of public interest than this. If the peach grower's crop fails, and he has none to sell, he will give up growing them, and if the growth is given up, the public will never find them abundant and cheap. On the other hand, if the peach grower calculates that a certain number of millions of baskets will be required, plants accordingly, and the trees take it into their heads to produce double the required number, so that nobody wants them at paying figures, he is again not likely to extend his peach orchards; so that in scarce times, the public has to pay higher than if orchards were more numerous. It is clear that the public interest is, in a great measure, bound with the peach grower's interest, and that, in chuckling over the peach grower's misfortune, it is in no way helping its own cause. Of course there is a slight degree of antagonism between buyer and seller. The one wants to get as much as he can for what he has to sell, and the other as much as he can for his money. But it is wholly to the buyer's interest, as a whole, that the peach grower should get reasonable profits. In this way he is encouraged to plant and produce, and the wholesome competition of so many who have to sell, keeps down inordinate prices. It is certainly a poor sort of principle which leads a great newspaper to teach editorially that the great public are to be, in any way, benefitted by the ruin of any branch of productive industry, whether it be peach growing or anything else.

Mahaleb and Mazzard Cherry Stocks.

The cherry is generally grafted on either the mazzard stock or the mahaleb. The mazzard is of the same nature with the ordinary cherry, and is usually saved from the hardy half wild trees that abound in old settled districts. The mahaleb is what is known in the books as the perfumed French cherry, and is of a different species to the one which yields the fruit we so much prize. The Mahaleb was introduced originally as a stock on which to dwarf the cherry, just as the quince is used to dwarf the pear; but many species thrive so well and so vigorously on it that in many quarters it is wholly used. This is especially true in the West, where the Mahaleb root was found to do well in most soils, and supposed to make a hardier cherry tree than when on the mazzard stock. It also grows very thriftily when young, which the mazzard very often does not, and thus the buds inserted grow more surely than on the mazzard, and so some nurseries grow only on this stock on which to grow their cherries. When cherries are simply ordered, therefore, they are quite likely to be grafted on the mahaleb stock.

In ordinary cases this is perhaps, if not an advantage, yet quite as well as if on the mazzard. They may be called "dwarfs" in comparison with many other cherry trees, which will, in time, grow as large as oaks; but they are not dwarfs in the sense that dwarf pears are, but make trees quite large enough for ordinary orchards, and then they have this advantage: that they come into good bearing condition somewhat sooner. Taking everything into consideration, they are certainly none the worse, if no better, for being on the mahaleb stock.

For profit, however, we think the mazzard stock is much superior for the pie cherry class, and these are among the most profitable of market fruits. This class, of which the early Richmond is the leading representative, are naturally meaker growers than the rest, and are improved by being worked on the stronger stocks. Even when full grown they seldom make trees more than thirty feet high on the mazzard stock, and this is quite large enough for a cherry tree to grow, in order to permit of its fruit being conveniently gathered. We saw some trees of the early Richmond this season, from which the owner gathered thirty dollars worth of fruit each, and these trees not yet to their prime, and these were on the mazzard stock. The fruit too were sold at rather low rates. It is very doubtful whether any fruit tree, as a general thing, is more profitable, or, in every way, more satisfactory than pie cherries on mazzard stocks. They are easier to grow than many fruits which require a continuous manuring of the ground. The cherry will do well on ground for years without any manuring, unless the soil is naturally extremely poor. Indeed the best cultivators regard a rich soil as rather injurious to the pie cherry tree.

THE SWAMP AZALEA.

Our native Azaleas, and the rhododendrons are highly prized in Europe—indeed more so than plants cultivated there. The people of that part of the world take great pains to have the soil just suited to them. Loose fibrous earth is often brought many miles, and the natural earth taken away, so that the very best chance was given them to do well. These plants look beautiful in their native places with us, but no one can imagine, who has not travelled in England and on the Continent and seen, how superior is their beauty there.

Our *Azalea Viscosa*, so abundant all through Maryland, is particularly worthy of culture. Its beautiful clear white blossoms have an additional charm in their delightful fragrance. As we see them in a wild state, they are appreciated, but in cultivation, with a little of the trouble given to them in England, their beauty would be so enhanced, that the plant would hardly be recognized by any as the same wild bush of the swamps. All that is necessary is to have a few wheelbarrowfulls of loose open soil, that will never become like brick, for the roots to grow in. The roots are very small and hair like, and they like to be kept cool. This is probably the reason why the plants of most of the species of azalea are found in low places or in woods. It is not because they like the shade or moisture in themselves, but because the roots in these cases are cool. At least this seems to be the experience of nurserymen, who tell us that both azaleas and rhododendrons do much better in the sun, exposed to the regular nursery practice, than in the shade.

A new fruit, the wild goose plum, says a Delaware paper, is attracting some attention in this State. It was brought from Mississippi by D. S. Myers, of Bridgeville, and looks much like the mountain cherry, but is larger. Its skin being tough, it will resist the curculio, it is believed. Mr. Fred. Williams, of Dover, has thirty or forty trees. The fruit is beautiful.

When an iron poker becomes soft by long usage, it can be hardened by heating to a redness and plunging several times in a pail of cold water.

GARDEN PEAS.

Every year or two new varieties of peas appear with great reputations which, however, do not last long, and we have to fall back on old and well-tried sorts. There has been probably some little gain since the time of Knight's Marrowfat and the old Prussian Blue, but very little. In a large lot of varieties set out this season for experiment sake, the Champion of England was on the whole the most satisfactory, and this one has been before the public now for about fifteen years. It has one fault in being rather tall, but yet the kinds known as dwarf peas are very unsatisfactory. They do not need sticks, but if the absence of sticks is to be at the expense of peas, where is the vine? It seems to be part of a pea's nature to want something to cling to, and they only grow well and bear well when they have this opportunity. It is often difficult to get sticks, but not if a little forethought is used. In most gardens there are small trimmings and prunings that, if saved, would be just the thing for peas to run on.

These remarks are, of course, intended to apply to garden culture, where the object is to get the largest possible product from the smallest piece of ground. In field culture sticks or branches for peas to run on are out of the question. It is not so much the largest crop from the ground, as the greatest convenience. But as to varieties, even here the dwarfs seldom pay, and perhaps there is no better for this form of peaculture than the Champion of England.

THE POTATO CROP.

As we suggested last year, so many were indifferent to the beetle, which did little damage on its first appearance, that our enormous crop of insects have appeared where the first visitors were allowed to establish themselves, and large numbers of planters have had their crops totally destroyed. Many believe that on this account the crop will be scarce and potatoes dear. This, we think, will prove a mistake. Many have been energetic in keeping down the insect, and thus saved their crops, while the season has been a remarkably good one for the potato generally. They, therefore, who succeed in saving them, will have some to spare to make up the average for those who do not. Besides all this, the Eastern growers, who always raise large quantities for shipment to regions south of their own, have planted much more land in potatoes than usual. On the whole, it is probable, that while there will be a loss in many quarters from the ravages of the colorado beetle, the whole crop will be a full one, and prices rule about the usual rates.

Maryland State Grange Patrons of Husbandry.

OFFICERS OF THE STATE GRANGE.

Master, Jos. T. Moore, Sandy Spring, Montgomery County.

Overseer, A. D. Woodruff, Princess Anne, Somerset County.

Lecturer, James S. Robinson, Jacobsville.

Steward, J. W. Corey, Fairlee.

Assistant Steward, Thos. S. Iglehart, Davidsonville.

Treasurer, J. N. Chiswell, Buckeystown.

Chaplain, Joseph Barlow, Sykesville.

Secretary, Edward Hall, of B., Millersville, Anne Arundel County.

Gatekeeper, Wm. Hepbron, Lynch's, Kent County.

Ceres, Mrs. Joseph T. Moore, Sandy Spring.

Flora, Mrs. J. E. Wilson, Rockville.

Pomona, Mrs. H. N. Lansdale, Monrovia.

L. A S., Mrs. J. W. Corey, Fairlee.

EXECUTIVE COMMITTEE.

Thos. F. Shepherd, Chairman, Uniontown, Carroll County.

Geo. Thomas, Great Mills, St. Mary's County.

Col. J. R. Emory, Centreville, Queen Anne County.

Thos. S. Iglehart, Davidsonville, Anne Arundel County.

Samuel Hinks, Urbana, Frederick County.

E. L. F. Hardcastle, Easton, Talbot Co.

The Third Annual session of the State Grange will be held in Frederick city, on the second Tuesday in March, 1876.

There are 150 Subordinate Granges in the State of Maryland; numbering, we suppose, not less than 5 000 members.

New Advertisements.

LADIES DEPARTMENT.

A CHAT WITH THE LADIES FOR AUGUST.

BY PATUXENT PLANTER.

Your voiceless lips, O! flowers, are living preachers—
Each cup a pulpit, and each leaf a book,
Supplying to my fancy numerous teachers,
From lowliest nook."

The spring flowers and the roses of June have performed their several duties of love and loveliness, and now "rest from their labors" But a well conducted garden is still an object of beauty, gay and bright as it should be with many of the choicest day or night blooming bulbs and plants. Some monthly and climbing roses take August to show off to the best advantage; the dahlia and lovely gladioli are now in their prime, and some bedding plants are in perfection and two or three, in their own symbolical language, tell us sweet sentiments and beautiful truths, which the old man, as well as the budding maid, might well heed and practice—such as the salvia, which preaches domestic virtues and declares woman's province is *home*. Veronica (Speedwell) declares—true love's a holy flame, and when 'tis kindled, ne'er can die. The sweet tuberose reminds us that blessings brighten as they take their flight. Sweet William says, one may smile, yet be a villain—this is well to be remembered by young ladies sometimes. Woodbine teaches us fraternal love, while the sorrel, so despised and disliked by the farmer, appropriately calls itself, wit ill-timed, and cautions us, that *he* makes a foe who makes a jest. And so my dear little lady, you and I, who are young, could go over a whole garden, and carry on, by these beautiful messengers, a complete courtship or flirtation, or those who are old, can discuss ethics, or converse upon almost any grave subject. This language of flowers is an interesting and instructive study for young girls especially. I used to do a good deal of courting with flowers; they were more beautiful in sentimental expressions than I could use in writing or verbally, even when under the mesmeric power of beauty's eye and magic voice.

During the dry spells, it is too much the practice to sprinkle the drooping flowers often. This has the effect of turning the roots upward to get moisture, and, not finding it in sufficient quantity, they perish; whereas, if left alone, they would go down until they got to the water bed, provided the soil was rich and had been deeply disintegrated. If water is used, all florists agree that out-door plants should be given a thorough drenching once a week or ten days. Keep the flower beds well cultivated. Sow salt on the gravel walks or pavements, occasionally, it will keep down the grass and weeds. You may now sow the seeds of the Fox Glove, Canterbury Bell, Pansies and other biennials from seed ripened this year. It is better than to keep the seeds over and to sow next spring, as the plants will be better and earlier if the seed be sown now. Transplant from the seed beds the seedlings of all perennials or biennials sowed in the spring, to the places where they are to blossom next year. If those places are not vacant, prick out the plants and set them a few inches apart in another bed, to get good roots and make vigorous growths. Pot cuttings which have taken root. Bud roses—make cuttings or layers of the Bengal, China, Tea and other roses for blooming next spring and summer. Make cuttings of Salvias, Heliotropes, Lantanas, Verbenas, &c., &c.

This is a good time to *start cuttings*. Daisy Eyebright, the accomplished lady writer for the *Country Gentleman*, says:—If you have not a green house or hot bed, it is the safest plan, in spring, to start them in water.

Fill small bottles or phials with warmish water, remove the lower leaves of the cuttings, (to be sure you have a bud at the base), and put them in water; hang up the phial to the window sash, tying a string about the mouth for this purpose. If cotton wool is put around the mouth of the phial, it will prevent the evaporation of the water, and make the roots sprout more quickly by keeping up a more even temperature. Oleanders can be rooted in this manner; also heliotropes, verbenas, roses, fuchias and all kinds of bedding-out plants.

The process is so simple that a mere child can succeed with it. As soon as the roots are an inch long, the cutting should be transplanted, taking care to spread out the tiny rootlets as they grow in the water.

Some fill up the bottle with rich earth, let it dry off for two or three days, and then break the glass and pot, or plant out the cuttings without disturbing its roots in the least degree. This is the most certain way of obtaining plants from cuttings.

I find in the *American Farm Journal* the following directions for keeping in good health, for years, those interesting pets of some ladies—*Gold Fish*:—

Gold fish may be kept ten or twelve years, (their average period of existence), by using the following precautions:

1st. Allow not more than one fish to two quarts of water.

2d. Use the same kind of water, whether well or river; change it every other day in summer, and twice each week in winter.

3d. Keep clean sand and pebbles at the bottom, washing it occasionally, or replace it with a fresh supply.

4th. Use a small net, rather than the hand, in changing the water.

5th. Feed with crackers, yolk of eggs, lettuce or flies, once each week, except in cold weather. Feed but little at a time. Remove any crumbs that may remain on the surface after feeding.

6th. Do not feed at all from November to the end of February, and but little during the following three months.

7th. If there are growing plants in the aquarium, water need be changed but rarely.

8th. Keep from sun and in coolest part of room.

A lady, in writing me once a witty and nice letter, commenced by alluding to General Grant as Ulysses in the 3d year of his reign, I now say, that in the 9th year of the reign of Ulysses, he ordered in the absence of all specie, as a slight effort to appease the clamors of the ladies and a few chosen merchant friends, that the mint should make and circulate a few silver dollars, to be known as Commercial *Trade Dollars*, so pure that they will circulate in any part of the globe at par, and at home be worth as much as gold. Why they were required to be *pure*, you will presently see, and it is thought, he being a far-seeing, wise politician, is paving his way against the indignation of the people, when he becomes a grandfather, and has *gold*

pieces made for his grandchildren. This is introductory to informing my unsophisticated lady friends, who live in the country, that the fashion with mothers just now, is to have one of the silver coins pierced near the rim, and through the hole put a bright colored ribbon, and hang around the baby's neck, to cut its teeth upon. They supply the place of the India rubber ring and rattle, as they supplanted the ivory ring and rattle; what they were substituted for I do not know, as my memory fails to recall what my mother made me cut my teeth with; I only feel sure that whatever simple thing it was, she was very proud of her boy's first tooth. At any rate, it would seem the mothers seem to be determined, in view of the present hard times and total absence of old bullion, to impress upon the coming generation the value of coin. It may be, this growing fashion will inaugurate specie payments once more—"large streams from little fountains flow," as we all know.

I wish you could have been at the beautiful display of rare plants, flowers and fruits, made at the exhibition of the Horticultural Society, on 17th June last in this city. Among some of the more conspicuous, were the daisy flowered blackberry, grows 30 feet in one year, and bears its lovely flowers in clusters; golden leaved dogwood; an epiphyllum grandiflora in full bloom, exhibited by the President, E. Whitman, Esq, and the admired most of all was a clereodendron Balfouri, in profuse bloom, by Mr. R. W. L. Rasin, an amateur florist. This, I think, is one of the most unique and beautiful flowers I ever saw. The flowers are small white pods, with a crimson stem sticking out at the end of each pod. The bush is crowded with flowers and nearly leafless. On a recent visit, I saw at the green houses of Mr. John Feast, some remarkable plants, one was the actinimdea, from the river Amo, in India. It is the newest creeper in this country, flowers beautiful, and leaves thick, like an apricot. Also, the variegated hawthorn, golden elder, centurea orea niger, white and green leaved dog-wood, yellow and green leaved strawberry tree; both these rare and handsome shrubs are from Japan direct. I will only mention a few others, that particularly command attention, such as the curious pedi lanthus peltula, with flowers like a child's foot—hence its name. The variegated retinos porus, a hardy evergreen, and copresna, something like our tree box. All these are late importations from Japan, the land of flowers and remarkable plants and trees.

We take great pleasure in publishing the following note which we received from this estimable and gifted lady and author, acknowledging our notice, in the June number of the *Farmer*, of her popular and widely circulated book, "Familiar Lectures on Botany," and really congratulate her that she is "*only* 82 *years*" of age, instead of 84, as we therein stated. May she live on to bless the world and "praise the Lord."

MRS. LINCOLN PHELPS returns thanks to Ezra Whitman, Esq., Publisher of the *Maryland Farmer*, and President of the "Maryland Horticultural Society," for his favorable notice of her "Familiar Lectures on Botany," and his friendly mention of the author. As to the book, it may be stated that reports of publishers' sales of the "Botany for Beginners," added to the three hundred and seventy-five thousand of the larger work, make the sum of Lincoln Phelp's Botanies amount to more than one million, besides editions of the two books which have been reported by publishers within the last year.

But the author cannot claim all the years that have been so reverently ascribed to her in Mr. Whitman's article, as, on this day, July 15, 1875, she numbers *only* 82 years, dating from July 15, 1793.

Mrs. Mary Somerville, at the age of 91, retained her habits of study; and to the day of her death was occupied with the revision and completion of a scientific work, illustrated with her own exquisite drawings: "it was with intense delight," says her daughter, "that she pursued her intricate calculations atfer her ninetieth and ninety-first years, and repeatedly told me how she rejoiced to find that she had the same readiness and facility in comprehending and developing those exceedingly difficult formulæ, which she possessed when young." Often also, she said, "how grateful she was to the Almighty Father, who had allowed her to retain her faculties unimpaired to so great age."

While we have *any being*, let us praise the Lord.

[*From the Christian at Work.*]

When the Fifth Maryland Regiment arrived at Boston to aid in celebrating the Centennial of Bunker Hill, their first act was to deposit a superb offering of flowers upon the monument erected there to commemorate the soldiers killed in the war of the Union. The following lines were written in connection therewith by a gifted lady of Boston:

TO THE FIFTH MARYLAND.

'Bove Northern graves, that summer tears have wet
In pledge of peace, divided hands have met;
And on the monument that o'er them towers,
Our Southern *heroes* have laid down their flowers,
In token of a sweet regretting,
These lives, swift setting.

Our sleeping soldiers have their honors won;
But changeless as the splendor of the sun,
This act, through coming centuries shall shine,
As noble impulse of a love divine;
As conquered selves their victories buying
Braver than dying.

One hundred years ago the patriots fought;
And with their blood this country's freedom bought;
Martyred, for North and South and East and West,
Beloved children, on one mother's breast;
And lo! these flowers, in consecration,
Unite the nation.

O! if the wind-blown seeds make earth's increase,
How *rich* will be *your harvesting* of Peace;
For, wafted upwards, noble deeds shall bear
Divinest blossoms, making heaven more fair;
Immortal sweetness exhaling
And *never* paling.

New Publications Received.

Batchelder's Popular Resorts and how to reach them.—John Batchelder, author and publisher: Boston. Price, only $2 00 per copy.

This is one of the most instructive and readable books that has issued lately from the press. It is illustrated by one hundred and fifty-two capital wood cuts, accompanied with an accurate and extensive map of the lines of travel. The typography, clean white paper on which it is printed, and the pleasant style in which it is written, makes it a beautiful table book, and indispensable to the tourist or intelligent pleasure seeker. The traveller, in after years, will look on it as an interesting souvenir of the past. It is no common guide book, but abounds in geographical knowledge, topographical description, and furnishes a fund of historic information in regard to the various places of resort, of any notoriety, in the whole Union. We know of no book which can so well beguile the traveller during the heated term, and to the stay-at-home class it will afford great pleasure, by taking them, in imagination, to the various places described.

Willard's "Practical Butter Book."—Rural Publishing Co., 78 Duane street, N. Y. Price, $1.00.

This book seems to meet the increasing demand over the country, for the fullest and latest information relative to butter making. The author is a clear and able writer, a practical butter maker and dairyman, and is President of the New York State Dairymen's Association, &c. Among the new topics of interest, and which, he says in his preface, have not heretofore been presented to the dairy public, are: Prof Wilkinson's plan for controlling temperature in dairy rooms; the Swedish system of setting milk for cream in ice water; the new practice adopted at the Ridge Mills Creamery, and the recent method of improving skimmed milk in skimmed cheese manufacture. These are fully discussed and will be found suggestive to practical and progressive butter makers.

Breakfast, Dinner and Tea.—We are indebted to the publishers, D. Appleton & Co., New York, through Cushing & Bailey, Baltimore, who have it for sale, for a copy of this really excellent work. Beside being a good cookery book, with 300 good recipes, it is highly entertaining since it contains much curious and instructive matter in relation to the gastronomic habits and peculiarities of all times and all countries. We highly commend this new book to the attention of ladies in particular. It should be in every intelligent and refined household in the land. It throws a literary charm over the culinary department, and elevates epicurism. It is a capital book to be read as table talk, and must become very popular.

The Sanitarian.—A monthly journal. Dr. A. N. Bell, Editor, 231 Broadway, N. Y. This able and entertaining journal is a punctual and always welcome visitor in our sanctum. The leading article in the July number was an important essay on the "methods of improving the homes of the laboring and tenement house classes of New York," by Dr. Stephen Smith. A. H. Dana, Esq., has also a striking article on Comparative Longevity. We commend this valuable journal to our readers.

Maryland Ploughman and Chesapeake Granger, a literary and agricultural journal, published at Annapolis, Md., by Messrs. E. S. Riley & Co. It is very creditably printed on beautiful paper. $1 a year.

American Engineer.—This valuable journal has been enlarged from 12 to 16 pages. It is full of useful information on other subjects besides its specialty—engineering.

The Pen Monthly for July has very pleasant reading matter, and is an able contribution to the sterling literature of the day.

Songs and Music—Pretty Little Jakey and Darling Aroon.—From F. W. Helmick, 278 N. Sixth street, Cincinnati, Ohio.

From A. Hance & Son, Nurserymen, Red Bank, New Jersey, their Price List of Peach and kindred Fruit Trees, &c.

DOMESTIC RECIPES.

Potato Pudding.—Mix together twelve ounces of boiled mashed potatoes, one ounce suet, one ounce (one-sixteenth of a pint,) of milk, and one ounce of cheese. The suet and cheese to be melted or chopped as fine as possible. Add as much hot water as will bake it for a short time in an earthen dish, either in front of the fire or in an oven.

Cure for Toothache.—It is said that drops prepared as follows, will cure the worst toothache ever known: One ounce of alcohol, two drams cayenne pepper, one ounce kerosene oil; let it stand twenty-four hours after mixing.

To Cure Hoarseness.—When the voice is lost, as is sometimes the case, from the effects of cold, a simple, pleasant remedy is furnished by beating up the white of one egg adding to it the juice of one lemon, and sweetening with white sugar to the taste. Take a teaspoonful from time to time. It has been known effectually to cure the ailment.

Headaches.—In the *Medical and Surgical Reporter* we note the following formula for sick headaches:—Granulated muriate of ammonia, one teaspoonful; acetate of morphia, one grain; water, half a pint. Dose for an adult, two teaspoonfuls every ten minutes (precisely) until relief is obtained.

Valuable Recipe for Gathered Breast.—Linseed oil, half pint; one piece of camphor the size of a pullet's egg, and a piece of wax the same size.—Mixed and stewed over a slow fire until well incorporated. A certain preventive and cure.

Lo, Monday is the "washing-day,"
As all good housewive's know,
Memorable of dinners hashed
And clothes as white as snow;
And Tuesday is the "ironing day"
'Mid cold or fog or heat;
And Wednesday is the "sewing-day,"
To see the clothes are neat;
And Thursday is a leisure day,
And Friday, brooms begin
To sweep away the household dirt,
'Fore Sunday's ushered in,
And Saturday is "baking day,"
Pies, puddings, cakes and bread,
And then, the weary week is done
And we—may go to bed!

Splendid Farm for Sale.—We call attention to the advertisement of Samuel Pulman, offering his farm for sale. It is one of the finest, best cultivated, and most profitable farms in the county. Mr. Pulman is a good English farmer, and has made money off the place, and desires to retire to easier life.

BALTIMORE MARKETS--JULY 29.

Prepared for the "Maryland Farmer" by **GILLMORE & CO.**, Produce Commission Merchants, 159 W. Pratt st.

[*Unless when otherwise specified the prices are wholesale.*]

ASHES.—Pots $6.75

BEESWAX.—31@32 cts.

BROOM CORN.—8@12 cts.

COFFEE.—Firm. Prices range from 17¼@21 cts. for ordinary to choice, gold duty paid.

COTTON.— Market firm—Ordinary, 13¾ cts; Good Ordinary 14 cts; Low Middling, 14¾ cts; Middling, 15⅛ cts.; Good Middling, 15½ cts; Middling Fair, 16 cts.

EGGS.—Market dull and easy.—Fresh lots at 16 cts. per doz.

FERTILIZERS.—No change to note. We quote:

Peruvian Guano	$66	₹ ton of	2000 lbs
Turner's Excelsior	50	₹ ton	"
Turner's Ammo. S. Phos	45	₹ ton	"
E. F. Coe's Ammo. S. Phos	55	₹ ton	"
Rasin & Co., Soluble Sea Island Guano	50	₹ ton	"
Rasin & Co., Ground Bone and Meat	"		"
Rasin & Co., Ammonia, Potash and Bone Phosphate of Lime	"		"
Zell's Ammon. Bone Super-Phos	45	₹ ton	"
Flour of Bone	60	₹ ton	"
John Bullock & Sons Pure G'd Bone	45	₹ ton	"
Whitman's phosphate	50	₹ ton	"
Bone Dust	45	₹ ton	"
Dissolved Bones	60	₹ ton	"
Missouri Bone Meal	47	₹ ton	"
New Jersey Ground Bone	40	₹ ton	"
Moro Phillips' Super-Phosphate Lime	50	₹ ton	"
"A A" Mexican Guano	30	₹ ton	"
"A" do. do	30	₹ ton	"
Plaster	$1.75	₹ bbl.	

FRUITS DRIED.—Cherries, 20@21 cents; Blackberries, 8½@9 cts; Whortleberries, 14 cts; Raspberries, 25@26 cts; Peaches, peeled, bright, 20@22 cts; Peaches, unpeeled, halves, 9@10 cts; Peaches, unpeeled, quarters, 8@9 cts.; Apples, sliced, bright, 9 @ 10 cts; Apples, quarters, bright, 7¾@8 cts. Market dull.

FLOUR.—Market Active—Super $4.50@5.00; Extra 5 25 @5.75; Western Family 6 00@7.25; Choice family, $8.25@ $8.50.

GRAIN—*Wheat*—Dull, fair to choice, white, 1.32@138; fair to choice, red 1.36@1 40. *Corn*—Southern, white 90@91—Yellow do 85@86—Western mixed 84@85 cts. *Oats*—62@65 cts.

HAY AND STRAW.—Timothy Hay, at $26@$28 per ton; Rye Straw $14@$15; Oat Straw $10@$11: Wheat Straw $9 00@$10 00.

HIDES.—Dull—Green 9@10 cts.; Dry salted 12@14 cts.; Dry Flint 15@16 cents.

PROVISIONS.—Bacon Shoulders, 9¾@10 cts.; Clear Rib Sides, 13@13¾ cts.; S. C. Hams, 15@16cts.

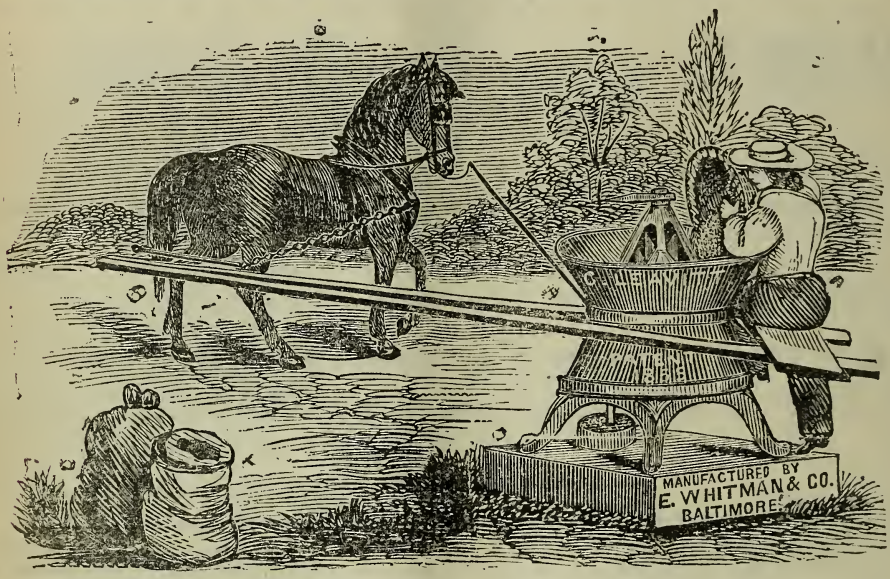
POTATOES.—Early Rose 2.75@$3.00 per Barrel.

RICE.—Carolina and Louisiana, 7¾@8¾ cts.

SALT.—Ground Alum $1.15@1 25; Fine $2 10@2.15 per sack; Turks Island 35@40 cts. per bushel.

WHISKEY.—$1.24 per gallon.

"YOUNG AMERICA"
CORN AND COB MILL.



The Young America Corn and Cob Mill, which so far surpasses all others, has been improved and made stronger than ever, and is now in the field, carrying everything before it. We annex a list of the Premiums it has received over the Double Cylinder, Little Giant, Magic Mill, Star Mill, Maynard's Mill, and all others that have come into competition with it.

First Premium at New York State Fair.	First Premium at N. Carolina State Fair.
" " " Ohio "	" " " Nashville, Tenn., Fair.
" " " Michigan "	" " " Ten County Fairs in Inda.

PRICE $50.

TRIAL OF CORN AND COB MILLS AT THE NORTH CAROLINA STATE FAIR.

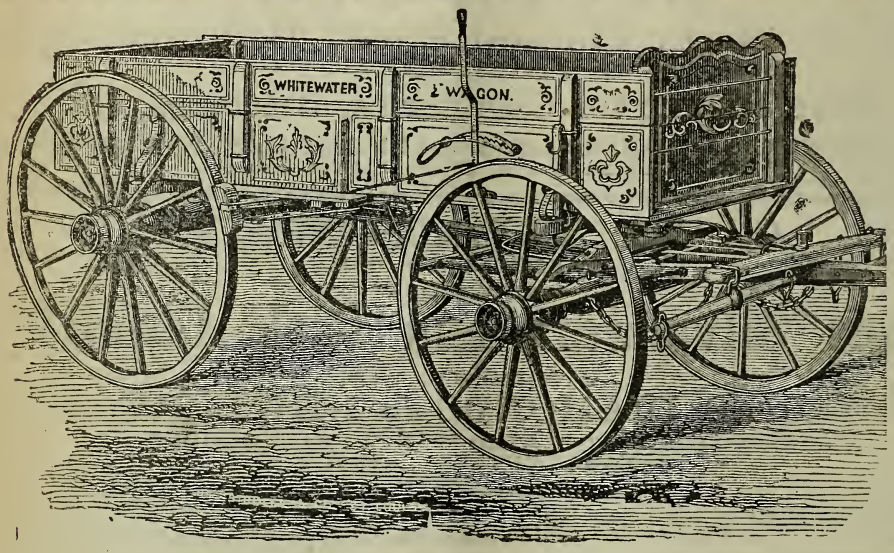
The following Table shows the Time occupied by each of the Mills on Exhibition in Grinding half a bushel of Corn and Cobs.

YOUNG AMERICA, 2 minutes and 40 seconds.
LITTLE GIANT, 4 " 45 "
MAGIC MILL, 6 "
SINCLAIR & CO.'S MILLS, 2 trials, average time, 6 minutes, 58 seconds.

E. WHITMAN & SONS,

145 and 147 Pratt Street, Baltimore, Md.

WHITMAN'S
FARM AND FREIGHT WAGONS.



REDUCED PRICES.

THIMBLE SKEIN.

		Capacity.
3 inch Thimble Skein, Light 2 Horse	$110 00	2500 lbs.
3¼ " " " Medium 2 Horse	115 00	3000 lbs.
3½ " " " Heavy 2 Horse	120 00	4000 lbs.
3¾ " " " 3 or 4 Horse	125 00	5000 lbs.
3¾ " " " for 4 Horses, with stiff tongue, pole and stretcher chains	140 00	5000 lbs.

The above are complete with whiffletrees, neck yoke, bed and top box, stay chains, &c.

IRON AXLE WAGONS.

1½ inch Iron Axle, Light 2 Horse	$115 00	2300 lbs.
1⅝ " " Medium 2 Horse	120 00	2800 lbs.
1⅞ " " Heavy 2 Horse	130 00	3500 lbs.
2 " " for 4 Horses, with stiff tongue, pole and stretcher chains,	140 00	5000 lbs.
2½ " " 4 " " "	170 00	7000 lbs.

The above are complete, with whiffletrees, neck yoke, bed and top box, stay chains, &c. *Brakes and Seats* furnished for either the Thimble Skein or Iron Axle Wagons at the following additional cost, viz:

Spring Seat, (with 2 steel springs) $6. Patent Brakes, $4. Lock Chain, $1.

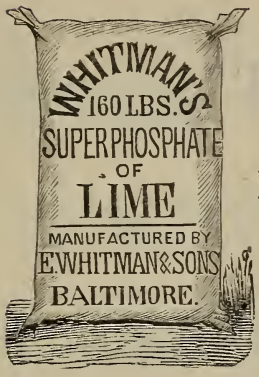
EVERY WAGON WARRANTED.

E. WHITMAN & SONS,

Nos. 145 & 147 W. Pratt Street,

BALTIMORE.

PURE FERTILIZERS.



WHITMAN'S
SUPER-PHOSPHATE OF LIME,

Manufactured only by E. WHITMAN & SONS,

IS THE

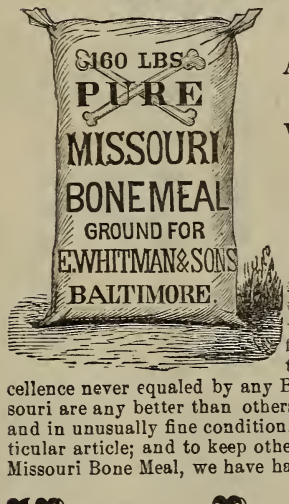
MOST RELIABLE PHOSPHATE IN THE MARKET.

Price $50 Per Ton, in Sacks, of 160 pounds each.

—o—

MISSOURI BONE MEAL.

Its Superior an Impossibility.



Analysis : Ammonia..... 4.38
Bone Phosphate of Lime.....49.51

Which is the highest analysis yielded by pure bone. The largest particles are smaller than timothy seed.

Price $48 Per Ton, in Sacks of 160 lbs. each.

CAUTION!

As some parties are offering as MISSOURI BONE MEAL other than the genuine article, we caution all persons that none is genuine unless the bags are branded as shown in the accompanying cut. Our Trade Mark is copyrighted, and we take the entire production of the Mill, and all infringements upon our copyright will be prosecuted to the full extent of the law. This article is perfectly pure, and has made a reputation for excellence never equaled by any Bone offered in this market. We do not claim that Bones ground in Missouri are any better than others, but we do claim that the Bone ground by OUR MILL is perfectly pure, and in unusually fine condition. "Missouri Bone Meal" is a name that we gave to designate this particular article; and to keep other dealers from palming off their goods upon those desiring the genuine Missouri Bone Meal, we have had our Trade Mark copyrighted.

New Jersey Ground Bone.

PRICE $40 PER TON.

We have sold hundreds of tons of this Bone, and it has invariably given satisfaction.

Peruvian Guano, South Carolina Bone (fine ground or dissolved,) Plaster, Sulphuric Acid, Potash, Sulphate of Soda, Nitrate of Soda, and all kinds of Fertilizer materials always on hand and for sale at the lowest market prices.

E. WHITMAN & SONS,

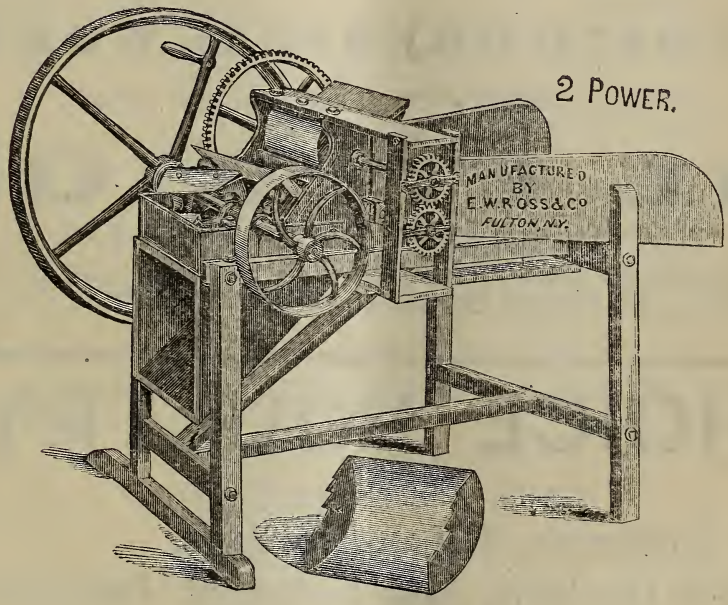
Dealers in Agricultural Implements and Garden Seeds,

sep-tf **145 & 147 W. PRATT ST., Baltimore, Md.**

THE CUMING'S
IMPROVED FEED CUTTER.

The Only Perfect Machines

FOR CUTTING HAY, STRAW, STALKS,
AND ALL KINDS OF FODDER.



We make Six Sizes, with capacity from 500 lbs. to 3 tons per hour.

The CUMING'S CUTTERS are fifteen years ahead of all other makes. Fifteen years ago they were what other cutters are now, that is, geared cutters. The Cuming's are not geared, receiving the power direct upon the knives.

The No. 1 has three knives, all other sizes four.

The machines are made from the choicest material and perfectly finished, and are well known in the North and West, and can now be had in all the principal cities and towns of Pennsylvania, Maryland and the South. Send for circulars to

E. W. ROSS & CO., Sole Manufacturers,

decly ***Fulton, Oswego Co., N. Y.***